

CITY OF FAIRFIELD

RESOLUTION NO. 2013 - 123

**RESOLUTION OF THE CITY COUNCIL APPROVING THE PLANS AND SPECIFICATIONS, AND AWARDING A CONTRACT TO BAY PACIFIC PIPELINES, INC., FOR THE EAST-WEST WATER TRANSMISSION PIPELINE SEGMENT 3, 36-INCH PROJECT**

**WHEREAS**, the bid opening for the East-West Water Transmission Pipeline Segment 3, 36-Inch Project took place on May 7, 2013; and

**WHEREAS**, the apparent low bidder was Bay Pacific Pipelines, Inc., in the amount of \$2,368,895.00; and

**WHEREAS** staff has reviewed the bid from Bay Pacific Pipelines, Inc., and found it to be in order.

**NOW, THEREFORE, THE COUNCIL OF THE CITY OF FAIRFIELD HEREBY RESOLVES:**

Section 1. The plans and specifications for the East-West 36-inch Water Transmission Pipeline Segment 3 Project are hereby approved.

Section 2. The City Manager is hereby authorized and directed to enter into a contract with Bay Pacific Pipelines, Inc., for the East-West Water Transmission Pipeline Segment 3, 36-Inch Project in the amount of \$2,368,895.

Section 3. The City Manager is authorized to enter into an escrow agreement for security deposits in lieu of retention for said contract, if necessary.

Section 4. The City Manager is hereby authorized to implement the above-mentioned contract and escrow agreement.

**PASSED AND ADOPTED** this 4<sup>th</sup> day of June 2013, by the following vote:

AYES: COUNCILMEMBERS: Price/Vaccaro/Bertani/Moy/Mraz

NOES: COUNCILMEMBERS: None

ABSENT: COUNCILMEMBERS: Moy

ABSTAIN: COUNCILMEMBERS: None

Nancy F. Price  
MAYOR

ATTEST:

Paulette Archer, Deputy  
CITY CLERK  
pw

CITY OF FAIRFIELD  
STATE OF CALIFORNIA

PROPOSAL

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch**

From Contractor: BAY PACIFIC PIPELINES INC.

To: City Clerk of the City of Fairfield

The undersigned declares that he/she has examined the locations of the proposed work, that he/she has examined the plans, specifications, and all the Contract documents, and hereby proposes to furnish all materials, labor, equipment, and perform all the work in strict accordance with said plans, specifications, and Contract documents in consideration of the attached schedule.

The undersigned further agrees that, upon written acceptance of this bid, he/she will within **FIFTEEN (15) working days** of receipt of such notice execute a formal Contract agreement with the City of Fairfield, with necessary bonds and certificate and City standard form endorsement of insurance. He/She also agrees that, in the case of default in executing the Contract, the proceeds of the check or bond accompanying his/her bid shall become the property of the City of Fairfield.

The undersigned agrees that, if awarded the Contract, he/she will commence the work upon written Notice to Proceed and shall diligently prosecute the same to completion before the expiration of **Two Hundred (200) calendar days** from the date of said written Notice to Proceed.

Bids are to be submitted for the entire work.

The amount of the bid for comparison purposes will be total amount of bid.

The bidder shall set forth for each unit basis item of work an item price and a total for the item, and for each lump sum item a total for the item, all in clearly legible figures in the respective spaces provided for this purpose. In the case of unit basis items, the amount set forth under the "Total" column shall be the extension of the item price bid on the basis of the estimated quantity for this item.

In case of a discrepancy between the item price and the total set forth for a unit basis item, the item price shall prevail, provided, however, if the amount set forth as an item price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the item price.

The following quantities are approximate only, being given as a basis for the comparison of bids, and the City of Fairfield does not expressly or by implication agree that the actual amount of work will correspond therewith and reserves the right to increase or decrease the amount of any portion of the work or to omit portions of the work as may be deemed necessary or advisable by the Engineer. The undersigned further agrees to accept the aforesaid unit bid prices in compensation for any additions or deductions caused by variation in quantity due to more accurate measurement or by any changes or alterations in the Project Plans or Specifications for the work.

Bidder acknowledges receipt of the following addenda:

1, 2  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# EAST-WEST WATER TRANSMISSION PIPELINE

## SEGMENT 3, 36-inch

### BID SCHEDULE

| Item No. | Item of Work   | Unit | Quantity | Unit Price | Total Price |
|----------|--|------|----------|------------|-------------|
| 1        | MOBILIZATION (INCLUDES CONFIRMING THE LOCATION OF EXISTING UTILITIES)  | LS   | 1        | 36,000.00  | 36,000.00   |
| 2        | EROSION CONTROL AND SWPPP  | LS   | 1        | 15,000.00  | 15,000.00   |
| 3        | TRAFFIC CONTROL  | LS   | 1        | 49,000.00  | 49,000.00   |
| 4        | UTILITY TRENCHING AND BACKFILL   | LF   | 3,436    | 210.00     | 721,560.-   |
| 5        | SHORING  | LS   | 1        | 15,000.00  | 15,000.00   |
| 6        | 36-INCH WATER TRANSMISSION PIPELINE  | LF   | 3,436    | 200.00     | 687,200.00  |
| 7        | 36-INCH BUTTERFLY VALVE  | EA   | 2        | 19,100.00  | 38,200.00   |
| 8        | 8-INCH COMBINATION AIR VALVE   | EA   | 5        | 18,750.00  | 93,750.00   |
| 9        | 8-INCH BLOW-OFF ASSEMBLY AND COVER   | EA   | 4        | 16,900.00  | 67,600.00   |
| 10       | ACCESS MANHOLE (INCLUDES LADDER)   | EA   | 4        | 19,700.00  | 78,800.00   |
| 11       | CATHODIC PROTECTION (INCLUDES INSTALLATION OF A NEW RECTIFIER WITH ELECTRICAL SERVICE AND A DEEP WELL ANODE) | LS   | 1        | 38,000.00  | 38,000.00   |
| 12       | TESTING AND SANITIZING OF PIPING SYSTEM  | LS   | 1        | 18,500.00  | 18,500.00   |
| 13       | INSTALL ADA CURB RAMP  | EA   | 13       | 3,500.00   | 45,500.00   |
| 14       | REMOVE AND REPLACE CURB AND GUTTER   | LF   | 100      | 25.00      | 2,500.00    |
| 15       | REMOVE AND REPLACE SIDEWALK  | SF   | 100      | 8.00       | 800.00      |
| 16       | COLD PLANE ASPHALT CONCRETE PAVEMENT (TAPER GRIND)   | LF   | 2,400    | 2.50       | 6,000.00    |
| 17       | COLD PLANE ASPHALT CONCRETE PAVEMENT (FULL 2" GRIND)   | SY   | 7,395    | 5.00       | 36,975.00   |
| 18       | BASE FAILURE REPAIR  | CY   | 100      | 240.00     | 24,000.00   |
| 19       | PAVEMENT REINFORCING FABRIC (PRF)  | SY   | 12,775   | 1.60       | 20,440.00   |
| 20       | ASPHALT CONCRETE OVERLAY   | TN   | 3,275    | 94.00      | 307,850.00  |
| 21       | ADJUST VALVES, MONUMENTS AND TRAFFIC BOXES TO GRADE  | EA   | 13       | 390.00     | 5,070.00    |
| 22       | ADJUST MANHOLES TO GRADE   | EA   | 6        | 525.00     | 3,150.00    |

|    |   |    |   |           |           |
|----|---|----|---|-----------|-----------|
| 23 | TRAFFIC STRIPING  | LS | 1 | 10,000.00 | 10,000.00 |
| 24 | ADDITIONAL CATHODIC PROTECTION (REPLACE<br>FAILED DEEP WELL ANODE AT CP018 NEAR<br>THE INTERSECTION OF CEMENT HILL ROAD AND<br>MANUEL CAMPOS PARKWAY) | LS | 1 | 48,000.00 | 48,000.00 |
|    |   |    |   |           |           |
|    |   |    |   |           |           |
|    |   |    |   |           |           |

Total = \$ 2,368,895.00

The bidder shall complete this form legibly and in its entirety. An incomplete form shall be grounds for disqualification of the bid.

**EAST-WEST WATER TRANSMISSION PIPELINE****SEGMENT 3, 36-inch****BID SCHEDULE**

| Item No. | Item of Work  | Unit | Quantity | Unit Price | Total Price |
|----------|---|------|----------|------------|-------------|
| 1        | MOBILIZATION (INCLUDES CONFIRMING THE LOCATION OF EXISTING UTILITIES)     | LS   | 1        |            |             |
| 2        | EROSION CONTROL AND SWPPP   | LS   | 1        |            |             |
| 3        | TRAFFIC CONTROL   | LS   | 1        |            |             |
| 4        | UTILITY TRENCHING AND BACKFILL  | LF   | 3,855    |            |             |
| 5        | SHORING   | LS   | 1        |            |             |
| 6        | 36-INCH WATER TRANSMISSION PIPELINE                                       | LF   | 3,855    |            |             |
| 7        | 36-INCH BUTTERFLY VALVE   | EA   | 1        |            |             |
| 8        | 8-INCH COMBINATION AIR VALVE  | EA   | 4        |            |             |
| 9        | 8-INCH BLOW-OFF ASSEMBLY AND COVER  | EA   | 3        |            |             |
| 10       | ACCESS MANHOLE (INCLUDES LADDER)  | EA   | 4        |            |             |
| 11       | CATHODIC PROTECTION (INCLUDES ADJUSTMENT OF EXISTING SEGMENT 2 RECTIFIER) | LS   | 1        |            |             |
| 12       | TESTING AND SANITIZING OF PIPING SYSTEM                                   | LS   | 1        |            |             |
| 13       | INSTALL ADA CURB RAMP   | EA   | 14       |            |             |
| 14       | REMOVE AND REPLACE CURB AND GUTTER  | LF   | 100      |            |             |
| 15       | REMOVE AND REPLACE SIDEWALK   | SF   | 100      |            |             |
| 16       | COLD PLANE ASPHALT CONCRETE PAVEMENT (TAPER GRIND)                        | LF   | 2,400    |            |             |
| 17       | COLD PLANE ASPHALT CONCRETE PAVEMENT (FULL 2" GRIND)                      | SY   | 8,520    |            |             |
| 18       | BASE FAILURE REPAIR   | CY   | 100      |            |             |
| 19       | PAVEMENT REINFORCING FABRIC (PRF)   | SY   | 13,900   |            |             |
| 20       | ASPHALT CONCRETE OVERLAY  | TN   | 3,650    |            |             |
| 21       | ADJUST VALVES, MONUMENTS AND TRAFFIC BOXES TO GRADE                       | EA   | 13       |            |             |

|    |  |    |     |  |  |
|----|--|----|-----|--|--|
| 22 | ADJUST MANHOLES TO GRADE   | EA | 8   |  |  |
| 23 | TRAFFIC STRIPING   | LS | 1   |  |  |
| 24 | REMOVAL AND DISPOSAL OF HYDROCARBON<br>CONTAMINATED SOILS        | CY | 950 |  |  |
| 25 | REMOVAL AND DISPOSAL OF HYDROCARBON<br>CONTAMINATED GROUND WATER | LF | 305 |  |  |

Total = \$ \_\_\_\_\_

**The bidder shall complete this form legibly and in its entirety. An incomplete form shall be grounds for disqualification of the bid.**

# EAST-WEST WATER TRANSMISSION PIPELINE SEGMENT 3, 36-inch

## DESIGNATION OF SUBCONTRACTORS

In accordance with Section 5 of the General Provisions for this Contract, the following list of subcontractors is submitted with the proposal and made a part thereof. **The bidder shall note that he/she shall perform with his/her own organization at least fifty percent (50%) of the work with the remainder of the work performed by subcontractors.**

If the Contractor fails to specify a subcontractor for any portion of the work to be performed under the Contract, he/she shall be deemed to have agreed to perform such portion him/herself, and he/she shall not be permitted to subcontract that portion of the work except under the conditions hereinafter set forth.

Subletting or subcontracting of any portion of the work for which no subcontractor was designated in the original bids shall only be permitted in cases of public emergency or necessity, and then only after receiving written approval from the Engineer.

The name and location of the shop or office of each subcontractor who will perform work or labor or render service to the Contractor in or about the construction of the project and that portion of the work to be performed by the subcontractor is as follows:

| Subcontractor's Name and Address          | Subcontractor's License Number | Portion of Work or Items to be performed | Percent of Total              |
|---|--------------------------------|--|-------------------------------|
| 1) <i>NORTHWEST Pipe Co.<br/>Chipp.</i>   | <i>—<br/>374600</i>            | <i>Supplier,<br/>Striping</i>            | <i>0.5%</i>                   |
| 2) <i>McMor Chlorination</i>              | <i>856586</i>                  | <i>Chlorination</i>                      | <i>0.5%</i>                   |
| 3) <i>FARWEST CORROSION CONTROL</i>       | <i>248232</i>                  | <i>CATHODIC PROTECTION</i>               | <i>4%<br/><del>0.4%</del></i> |
| 4) <i>INTERSTATE GRADING &amp; PAVING</i> |                                | <i>OVERLAY ASPHALT</i>                   | <i>18%</i>                    |
| 5) <i>BIG MTN. MECHANICAL</i>             | <i>640209</i>                  | <i>Welding</i>                           | <i>1 1/2%</i>                 |

Note: Attach additional sheets, if required.

Steel Water Pipe or Concrete Pressure Pipe Supplier (Write in Manufacturer's name below.)

*Northwest Pipe Co.*  
Name



NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY BIDDER  
AND SUBMITTED WITH BID

CATHERINE CAREW, being first duly sworn, deposes and says that he or she is PRESIDENT of BAY PACIFIC PIPELINES INC, the party making the foregoing bid, that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the Contract of anyone interested in the proposed Contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

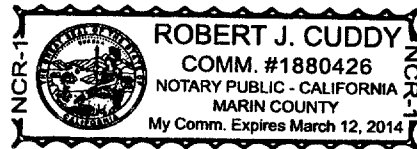
I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

5/7/2013  
(Date)

Catherine Carew  
(Signature)

NOTE: THIS FORM MUST BE NOTARIZED.

State of California, County of Marin  
Subscribed and sworn to (or affirmed) before me on  
this 7 day of May, 2013,  
by Catherine Carew  
proved to me on the basis of satisfactory evidence to  
be the person(s) who appeared before me  
Robert J. Cuddy  
Signature



BAY PACIFIC PIPELINES INC.  
Name of Firm

214 PACHECO AVE, NOVATO, CA 94947  
Business Address

(415) 897-6958  
Phone Number

Catherine Carow  
Signature of Responsible Official

Contractor's License:

a. Class: A  
b. Number: 524020  
c. Expiration Date: 2/28/2014

FEI Number: 94-3056784

If this is corporation or partnership, give the legal name of corporation, president, secretary, treasurer, or the names of all of the partners.

BAY PACIFIC PIPELINES INC.

CATHERINE CAROW, PRESIDENT/TREASURER

EUGENE CAROW, VICE PRESIDENT/SECY/MGR.

CITY OF FAIRFIELD  
STATE OF CALIFORNIA

EAST-WEST WATER TRANSMISSION PIPELINE SEGMENT 3

Addendum No. 1

April 23, 2013

This constitutes Addendum No. 1 to the Contract Documents for the EAST-WEST 36" WATER TRANSMISSION PIPELINE SEGMENT 3. The Bidder shall acknowledge receipt of this Addendum on Page P-2 of the Bidder's Proposal (Blue Section) and attach this signed Addendum to the Bidder's Proposal when submitted.

**PROJECT SPECIFICATIONS**

**Notice to Contractors (white section):**

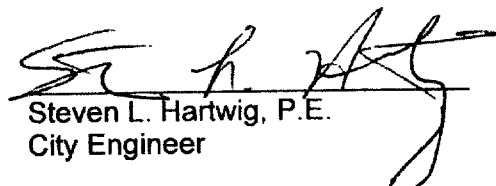
- 1) Please revise IB-2 item No. 8 to state the following:  
" Sealed bids will be received until Tuesday at 2:00 p.m. on May 7, 2013 at the office of the City Engineer, 3<sup>rd</sup> floor City Hall, 1000 Webster Street, at which time bids will be opened. No phones are available at the City offices for use by bidders. The wall clock at the Department of Public Works counter will be the final determination of time."
- 2) Please revise IB-2 item No. 9 as follows:

| Date                                | Event                         |
|-------------------------------------|-------------------------------|
| April 1, 2013 to <b>May 7, 2013</b> | Bid Acceptance Period         |
| April 19, 2013                      | Deadline for Bid Questions    |
| <b>May 7, 2013</b>                  | Open Bids                     |
| <b>June 4, 2013</b>                 | Anticipated Council Award     |
| <b>July 1, 2013</b>                 | Anticipated Notice to Proceed |

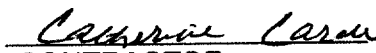
**Instruction to Bidders (white section):**

- 3) Please revise IB-3 item No. 1, Receipt of Bids, to state the following:  
"The City Engineer of the City of Fairfield, California will receive, at his office at City Hall, sealed proposals on or before 2:00 p.m. on **Tuesday, May 7, 2013.**"

APPROVED:

  
Steven L. Hartwig, P.E.  
City Engineer

ACKNOWLEDGEMENT:

  
CONTRACTOR  
Bay Pacific Pipelines Inc.

CITY OF FAIRFIELD  
STATE OF CALIFORNIA

EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch

Addendum No. 2

April 29, 2013

This constitutes Addendum No. 2 to the Contract Documents for the EAST-WEST WATER TRANSMISSION PIPELINE, SEGMENT 3, 36-inch. The Bidder shall acknowledge receipt of this Addendum on Page P-2 of the Bidder's Proposal (Blue Section) and attach this signed Addendum to the Bidder's Proposal when submitted.

**PROJECT SPECIFICATIONS**

**Notice to Contractors / Instructions to Bidders (White Section):**

1. Replace Notice to Contractors, Item 1 as follows:

NOTICE IS GIVEN that the City of Fairfield will receive bids for the furnishing of all labor, equipment, materials, transportation, services and incidentals necessary for the construction and completion of the:

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch**

General Work Description: The Project is located along Illinois Street from its intersection with Pennsylvania Avenue, along Great Jones Street and Broadway Street to **just west of** the intersection of Broadway Street with Union Avenue in the City of Fairfield. The work generally consists of, but is not limited to, the following: furnishing and installing the Segment 3, 36-inch diameter, buried potable water transmission piping, buried butterfly isolation valves, pipeline access manholes with 20-inch flanged manways, valves, appurtenances, cathodic protection **system with rectifier, deep well anodes and** test stations, connections to existing potable water transmission pipelines, and restoration of the Project work sites, as necessary, to provide a complete operating water transmission pipeline to be placed into operation at a later date. All equipment shall be installed in accordance with the manufacturer's requirements and recommendations.

The Contract includes any other work as shown on the Project Plans including asphalt concrete overlay of portions of the streets and new ADA curb ramps as specified in the Contract Documents and as directed by the City Engineer. Specifically, the Project will also include the **replacement of the deep well anode near the intersection of Cement Hill Road and Manuel Campos Parkway.**

2. Insert missing Appendix 2 – C&D Checklist as Page IB-12A (between Pages IB-12 and -13). See attached.

Proposal (Blue Section) and Agreement (White Section):

3. Replace Pages P-3 and -4 and Pages A-4 and -5 with P-3A and -4A and Pages A-4A and -5A to adjust the Bid Schedule quantities to reflect the following changes: The requirement to handle and dispose of hydrocarbon contaminated soils and water have been deleted since 419 feet of 36-inch water line has been removed from the Segment 3, 36-inch Project, while a rectifier and another butterfly valve (with associated air relief valve and blow-off) have been added to the Segment 3, 36-inch Project and the replacement of the Deep Well Anode at the existing CP 018 rectifier site near the intersection of Cement Hill Road and Manuel Campos Parkway has been added as a new work item.
4. Page A-1, Item 1.a., update the "Plans" reference to read as follows:
  - a. Plans prepared for same by C+D Infrastructure Engineers  
numbered C1 through C12 and CP-1 through CP-8 (19 sheets total)  
and dated April 2013.

Special Provisions (Goldenrod Section):

5. Replace Item 101.0 to reflect the revised project scope as follows.

101.0 LOCATION AND DESCRIPTION OF WORK

The limits of work for this Project shall be confined along Illinois Street from its intersection with Pennsylvania Avenue, along Great Jones Street and Broadway Street to **just west of** the intersection of Broadway Street and Union Avenue in the City of Fairfield (i.e., from Station 158+75.00 to Station **192+50.00** as shown on Sheets C3 through C6 of the Project Plans). If difficulty arises in interpreting the limits of work, the Contractor shall request, in writing, each item requiring clarification. The City Engineer will define them more specifically. The limits shall be denoted on the pavement surface in paint before work is to begin.

The Contractor shall furnish and install the water transmission pipeline in accordance with these Specifications and Project Plans and provide all labor, equipment, materials, transportation, services and incidentals necessary for construction and completion of the **East-West Water Transmission Pipeline – Segment 3, 36-inch.**

The work generally consists of, but is not limited to, the following: furnishing and installing the Segment 3, 36-inch diameter, buried potable water transmission piping, buried butterfly isolation valves, pipeline access manholes with 20-inch flanged manways, valves, appurtenances, cathodic protection **system with rectifier, deep well anodes and test stations**; connections to existing potable water transmission pipelines, and restoration of the Project work sites, as necessary, to provide a complete operating water transmission pipeline to be placed into operation at a later date. All equipment shall be installed in accordance with the manufacturer's requirements and recommendations.

The Project also includes any other work as shown on the Project Plans, including asphalt concrete overlay of a portion of the streets and new ADA curb ramps, as specified in the Contract Documents or as directed by the City Engineer. Specifically, the Project will also include the **replacement of the deep well anode near the intersection of Cement Hill Road and Manuel Campos Parkway.**

#### A. PIPELINE MATERIAL

The 36-inch diameter East-West Water Transmission Pipeline, Segment 3, installed in the City of Fairfield from Station 158+75.00 to Station **192+50.00** (i.e., between existing Segment 2, 36-inch, and future Segment 4, 36-inch) may be cement mortar lined and coated AWWA C200 Steel Water Pipe (SWP) and/or AWWA C303 Reinforced Concrete Pressure Pipe (CPP) as shown on the Project Plans. The Contractor shall select the type of 36-inch diameter pipeline material described above and advise the City Engineer of the material and the pipe manufacturer to be used at least five (5) working days prior to the Pre-Construction Conference. (See Item 108.0.A below.)

#### B. PIPELINE COMPLETION

This Project is one of many segments in the East-West Water Transmission Pipeline. It is the intent of the City to place Segment 3, 36-inch, of the pipeline into operation at a later date, once all segments are complete. Thus, this Contract work shall include all testing and sanitizing of Segment 3, 36-inch, of the piping system plus additional sanitizing of the portion of Segment 2, 36-inch diameter, pipeline up to the butterfly isolation valve in Pennsylvania Avenue (i.e., Station 256+05, 270 linear feet). The Contractor shall leave the butterfly valve at the connection point to Segment 2, 36-inch, closed and leave the isolated, sanitized Segment 3, 36-inch and the portion of Segment 2, 36-inch, pipelines full of chlorinated water. (See the Item entitled "Testing and Sanitizing of Piping System" below.)

The Contractor shall **install and calibrate a new cathodic protection system rectifier and associated deep well with supporting electrical services at Station 192+40 to provide corrosion protection for the Segment 3, 36-inch, pipeline.**

6. Replace Item 211.0, CATHODIC PROTECTION, Item A, Procedure, with the following.

The Cathodic Protection work shall be in accordance with Technical Specifications 16750, **Cathodic Protection**; 16751, **Cathodic Protection Supplement**; and 16752, **Electrical Services**. Work included in this Item consists of procuring and installing all components of the cathodic protection system, including **rectifier (with calibration of and electrical service to the rectifier)**, **deep well anodes**, permanent reference electrodes, electrical isolating joints, cables, test stations, coating repair, joint bonds, and any other work necessary to complete the installation in an efficient and workmanlike manner in accordance with the Project Plans and these Special Provisions.

7. Delete Items 220.0 REMOVAL AND DISPOSAL OF HYDROCARBON CONTAMINATED SOILS and 221.0 REMOVAL AND DISPOSAL OF HYDROCARBON CONTAMINATED WATER.
8. Add new Section 222.0, ADDITIONAL CATHODIC PROTECTION, as follows:

222.0     ADDITIONAL CATHODIC PROTECTION

A. Procedure

The Additional Cathodic Protection work shall be in accordance with Technical Specifications 16750, Cathodic Protection; 16751, Cathodic Protection Supplement; and 16752, Electrical Services. Work included in this Item consists of potholing to locate the Solano Irrigation District's (SID's) 60-inch Putah South Canal Cement Hill Bypass Pipeline; procuring and installing a replacement deep well anode at Rectifier Station CP018 near the intersection of Cement Hill Road and Manuel Campos Parkway plus any other adjustments or relocations necessary or indicated on Addendum 2 Sheets C1 and C2 and Project Plans CP-1 and CP-2 or directed by the City Engineer to replace the failed Deep Well Anode at this location in an efficient and workmanlike manner in accordance with the referenced drawings and these Special Provisions.

B. Measurement and Payment

The Contract lump sum price paid for the Additional Cathodic Protection work shall include, but not be limited to, potholing the SID 60-inch water line, replacing the failed Deep Well Anode; installing, relocating and adjusting any additional equipment and attaching components to the SID water pipeline and adjacent piping, testing and all incidentals arising from "Additional Cathodic Protection" work.

Full compensation for all necessary Additional Cathodic Protection work shall be considered as included in the Contract lump sum price for the Bid Item "Additional Cathodic Protection" and no additional compensation will be allowed.

Technical Specifications (Goldenrod Section):

9. TS 02400, Steel Water Pipe, replace Items 2.3.A.4 and 2.6.A.1 with the following:

Joint Design: The SWP shall have doubled welded joints (i.e., welds both inside and outside) between Station 181+20 and Station 182+50 due to the proximity of an existing large diameter sanitary sewer line. Each double welded lap joint or butt strap joint requires a 1/4-inch diameter tap for air pressure (i.e., leak) testing.

10. Technical Specification 02410, Concrete Pressure Pipe, replace Items 2.3.E and 3.2.A.4 with the following:

Joint Design: The CPP shall have doubled welded joints (i.e., welds both inside and outside) between Station 181+20 and Station 182+50 due to the proximity of an existing large diameter sanitary sewer line. Each double welded lap joint or butt strap joint requires a 1/4-inch diameter tap for air pressure (i.e., leak) testing.

11. Technical Specification 16750, replace Item 1.2.A.1 with the following:

**"Cathodic protection of all new underground metallic pipelines associated with the Segment 3, 36-inch diameter pipeline work. Any directions or requirements (e.g., rectifier details, deep well anode requirements, electrical service installation) not found in this Specification are provided in Technical Specifications 16751, Cathodic Protection Supplement, or 16752, Electrical Services."**

12. Add Technical Specification 16751, Cathodic Protection Supplement, to incorporate the addition of a rectifier and deep well anode work to the Cathodic Protection System.

13. Add Technical Specification 16752, Electrical Services, to support the installation of the rectifier at Station 192+40.



## **PROJECT PLANS**

14. Sheet C1, Revise the **PIPE JOINT NOTE** to read as follows:

“PIPE JOINTS BETWEEN STATIONS 181+20 AND STATION 182+50 SHALL BE WELDED BOTH INSIDE AND OUTSIDE DUE TO THE PROXIMITY OF A LARGE SANITARY SEWER LINE.”

and revise the **SHEET INDEX** to add sheets CP-6, CP-7 and CP-8, all “CATHODIC PROTECTION” to the listing.

15. Replace Sheets C3, C4 and C6 to incorporate the installation of an additional butterfly valve, air relief valve and blow-off near Station 158+75, the additional potholing requirement to locate the MCI cable line at Station 169+85, the addition of a corrosion protection system rectifier at Station 192+40, changing the end of the Project from Station 197+30 to Station 192+50, and replacing a failed Deep Well Anode near the intersection of Cement Hill Road and Manuel Campos Parkway.
16. Delete Sheets CP1 through CP-5 and add new Sheets CP-1 through CP-8 to incorporate the requirements for installing a rectifier at Station 192+40 and a new deep well anode near the intersection of Cement Hill Road and Manuel Campos Parkway. Also add Addendum 2, Sheet C1, Vicinity Map, and Sheet C2, Location Map, and CP-1 and CP-2 (11" X 17" Sheets) for the Cement Hill Deep Well Anode Replacement work (i.e., Additional Cathodic Protection work).

## **PREBID MEETING QUESTIONS AND RESPONSES**

17. Q: Which LDs (Liquidated Damages) are correct? A-2 or GP-18?

A: The Articles of Agreement (i.e., Article II on Page A-2) for the Segment 3, 36-inch, Project supersede the General Provisions. (The LDs will be \$1000 per day.)

18. Q: The Steel Water Pipe (SWP - Section 02400) and Concrete Pressure Pipe (CPP Section 02410) specifications require double weld joints from Station 181+20 to Station 182+50 and from Station 193+65 to Station 197+30 although Note 2 of Details 2 and 4 (should be Detail 3) on Sheet C7 allows an optional inside or outside weld. Please confirm that the only joint allowed in these areas is a double welded joint with a 1/4-inch tap for the air test.

A: Confirmed. (Note: The portion of the line from Station 193+65 to Station 197+30 has been deleted for the Project.)

19. Q: In all other locations the specified joint is a single welded joint with a Carnegie rubber gasket per Detail 3 on Sheet C7. However, Note 3 says a double welded joint can be substituted for the rubber gasket. Please confirm whether this will be allowed and if a 1/4-inch tap for the air test is also required.

A: Confirmed. Per the Piping Specifications 02400 and 02410, a 1/4-inch tap for the air test is required for all double welded joints.

20. Q: On Sheet C1, Design Criteria, it is stated that the design pressure is Class 200, but the operating/ working pressure is 130 psi. Please confirm what pressure is to be used to design the Steel Water Pipe / Concrete Pressure Pipe for the Pw value and Y is the maximum yield point of steel allowed, 33,000 psi.

A: Confirmed. Use 200 psi design of the pipe. The Pw value and Y is the maximum yield point of steel allowed, 33,000 psi.

21. Q: What is the Classification of the proposed contaminated soils? Is it to be priced as Class 1, 2 or 3 HAZ or Non HAZ. This makes a big difference in where the material can be hauled to and disposed of and the costs associated with these operations.

A: The portion of the Project associated with contaminated soils and water has been deleted from the scope of work.

22. Q: Extra work for disposal of contaminated water?

A: The portion of the Project associated with contaminated soils and water has been deleted from the scope of work.

23. Q: Extra fees and permits for disposal of contaminated water?

A: The portion of the Project associated with contaminated soils and water has been deleted from the scope of work.

24. Q: Classification of potentially contaminated soils and water.

A: The portion of the Project associated with contaminated soils and water has been deleted from the scope of work.

25. Q: Will the restrictions of the Special Provisions, Section 117, Working Hours and Night Work, be strictly enforced? Or can they be adjusted with approved Traffic Control measures?

A: The City Engineer can approve specific requests for extended working hours as indicated in the Special Provisions.

26. Q: Can the requirements for Construction Demolition and Recycling be expanded? How does a Contractor become a Certified Hauler?

A: Refer to Page IB-7, Item 15. Although a certified hauler is not required, the Contractor can become certified by coordinating with the Public Works Office identified in the Item 15 or contact Esther Blanco at (707) 428-7528.

27. Q: Clarify permits and fees required.

A: Other than the fees for water used, the Project is within the City boundary and thus is permitted by awarding the Contract.


28. Q: Do we have to dechlorinate the water left in the new pipeline segment after successful bacteria testing.

A: Yes, and then refill the line to leave the Segment 3, 36-inch pipeline and the 270 feet of the Segment 2, 36-inch pipeline full of normal City of Fairfield chlorinated water until these lines are put in service.

APPROVED:

   
Steven L. Hartwig, P.E.  
City Engineer

ACKNOWLEDGEMENT:

  
Bay Pacific Pipelines Inc.  
CONTRACTOR

## Construction & Demolition Debris Materials Checklist

Project/Permit #: \_\_\_\_\_

Project Address: \_\_\_\_\_

Applicant: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Type of Project: ☐ New Construction ☐ Repair ☐ Addition ☐ Alteration ☐ Demolition

Project Size: \_\_\_\_\_ sq. ft.

The City of Fairfield requires that construction and demolition projects recycle at minimum 50% of all project materials generated by their projects. All contractors are required to complete this checklist prior to obtaining a building or demolition permit. At the conclusion of the project, the contractor must report all tons recycled and disposed by material type and file a Construction and Demolition Recycling Report with the City of Fairfield Recycling Coordinator within (60) days of job completion.

Please check all materials to be generated as a result of this project and estimate quantities:

| Material Type  | Estimated Quantities (Specify tons or cubic yards, if possible) |
|--|---|
| <input type="checkbox"/> Asphalt   | _____   |
| <input type="checkbox"/> Brick   | _____   |
| <input type="checkbox"/> Cardboard   | _____   |
| <input type="checkbox"/> Concrete  | _____   |
| <input type="checkbox"/> Dirt / Clean Fill                                     | _____   |
| <input type="checkbox"/> Drywall / Sheetrock                                   | _____   |
| <input type="checkbox"/> Lumber  | _____   |
| <input type="checkbox"/> Plastic   | _____   |
| <input type="checkbox"/> Roofing Materials                                     | _____   |
| <input type="checkbox"/> Metals  | _____   |
| <input type="checkbox"/> Green Waste   | _____   |
| <input type="checkbox"/> Salvaged Items (i.e. fixtures, lumber, windows, etc.) | _____   |
| <input type="checkbox"/> Other Materials (please list): _____                  | _____   |

☐ Check here that you understand that you must also complete a Construction and Demolition Recycling Report within (60) days of job completion. Call 707-428-7489 for technical assistance after reading all forms.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Return completed form to: Recycling Coordinator, City of Fairfield, 1000 Webster St., Fairfield, CA 94533.

For assistance with this form, please call 707-428-7489.



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# EAST-WEST WATER TRANSMISSION PIPELINE

## SEGMENT 3, 36-inch

### BID SCHEDULE

| Item No. | Item of Work   | Unit | Quantity | Unit Price | Total Price |
|----------|--|------|----------|------------|-------------|
| 1        | MOBILIZATION (INCLUDES CONFIRMING THE LOCATION OF EXISTING UTILITIES)  | LS   | 1        |            |             |
| 2        | EROSION CONTROL AND SWPPP  | LS   | 1        |            |             |
| 3        | TRAFFIC CONTROL  | LS   | 1        |            |             |
| 4        | UTILITY TRENCHING AND BACKFILL   | LF   | 3,436    |            |             |
| 5        | SHORING  | LS   | 1        |            |             |
| 6        | 36-INCH WATER TRANSMISSION PIPELINE  | LF   | 3,436    |            |             |
| 7        | 36-INCH BUTTERFLY VALVE  | EA   | 2        |            |             |
| 8        | 8-INCH COMBINATION AIR VALVE   | EA   | 5        |            |             |
| 9        | 8-INCH BLOW-OFF ASSEMBLY AND COVER   | EA   | 4        |            |             |
| 10       | ACCESS MANHOLE (INCLUDES LADDER)   | EA   | 4        |            |             |
| 11       | CATHODIC PROTECTION (INCLUDES INSTALLATION OF A NEW RECTIFIER WITH ELECTRICAL SERVICE AND A DEEP WELL ANODE) | LS   | 1        |            |             |
| 12       | TESTING AND SANITIZING OF PIPING SYSTEM  | LS   | 1        |            |             |
| 13       | INSTALL ADA CURB RAMP  | EA   | 13       |            |             |
| 14       | REMOVE AND REPLACE CURB AND GUTTER   | LF   | 100      |            |             |
| 15       | REMOVE AND REPLACE SIDEWALK  | SF   | 100      |            |             |
| 16       | COLD PLANE ASPHALT CONCRETE PAVEMENT (TAPER GRIND)   | LF   | 2,400    |            |             |
| 17       | COLD PLANE ASPHALT CONCRETE PAVEMENT (FULL 2" GRIND)   | SY   | 7,395    |            |             |
| 18       | BASE FAILURE REPAIR  | CY   | 100      |            |             |
| 19       | PAVEMENT REINFORCING FABRIC (PRF)  | SY   | 12,775   |            |             |
| 20       | ASPHALT CONCRETE OVERLAY   | TN   | 3,275    |            |             |
| 21       | ADJUST VALVES, MONUMENTS AND TRAFFIC BOXES TO GRADE  | EA   | 13       |            |             |
| 22       | ADJUST MANHOLES TO GRADE   | EA   | 6        |            |             |

|    |   |    |   |  |  |
|----|---|----|---|--|--|
| 23 | TRAFFIC STRIPING  | LS | 1 |  |  |
| 24 | ADDITIONAL CATHODIC PROTECTION (REPLACE<br>FAILED DEEP WELL ANODE AT CP018 NEAR<br>THE INTERSECTION OF CEMENT HILL ROAD AND<br>MANUEL CAMPOS PARKWAY) | LS | 1 |  |  |
|    |   |    |   |  |  |
|    |   |    |   |  |  |
|    |   |    |   |  |  |

Total = \$ \_\_\_\_\_

## **SECTION 16751**

### **CATHODIC PROTECTION SUPPLEMENT (IMPRESSED CURRENT SYSTEM)**

#### ***PART 1 - GENERAL***

##### **1.1 SCOPE**

- A. The Contractor shall furnish and install all materials and equipment and provide all labor necessary to complete the work shown on the Project Plans and/or listed below and all other work and miscellaneous items not specifically mentioned but reasonably inferred for a complete installation, including all accessories and appurtenances required for a complete system.

##### **1.2 WORK INCLUDED**

- A. Work included in this section consists of all components of the cathodic protection system, including rectifier, anodes, permanent reference electrodes, electrical isolating joints, cables, test stations, coating repair, joint bonds, and any other work necessary to complete the installation.
  - 1. Cathodic protection of all new underground metallic pipelines and steel casings.
  - 2. Trenching and other excavation.
  - 3. Installation of rectifier, AC power to rectifier, anodes, reference electrodes, cables, joint bonds, electrical isolating joints, and test stations.
  - 4. Dust alleviation and control.
  - 5. Provide shop drawings, reports, permits, and obtain engineer's approval where required.
  - 6. Correction of all deficiencies.
  - 7. Cleanup and restoration of surfaces in improved areas.
  - 8. The work shall include the provision of all materials, equipment, and apparatus not specifically mentioned herein or noted on the plans, but which are obviously necessary to complete the work specified.



### 1.3 QUALITY ASSURANCE

#### A. General

All work shall be performed under the supervision of and to the satisfaction of the Engineer.

#### B. Testing

Proper operation of all cathodic protection components shall be subject to testing in accordance with NACE SP0169-2007 to ensure proper installation and operation. The Contractor shall be responsible for correction of all deficiencies and all costs incurred for associated re-testing prior to final acceptance.

### 1.4 CODE REQUIREMENTS

- A. All materials, workmanship, and installation shall conform to all requirements of the legally constituted authority having jurisdiction. These authorities include, but are not limited to, the latest revision of the National Electric Code, (NFPA 70) General Construction Safety Orders of the Industrial Accident Commission, OSHA; and all other applicable State, County, or City codes and regulations. Nothing in the drawings or specifications is to be construed to permit work not conforming to these regulations or codes. Where larger size or better grade materials than that required by these regulations and codes are specified, the specifications and drawings shall have precedence.

### 1.5 REFERENCE SPECIFICATIONS

- A. American Society of Testing and Materials (ASTM)
- B. American Water Works Association (AWWA)
- C. National Association of Corrosion Engineers (NACE) International
- D. Occupational Health and Safety Administration (OSHA)
- E. National Fire Protection Association (NFPA)
- F. National Electrical Manufacturers Association (NEMA)

## 1.6 SUBMITTALS

- A. Prior to commencing work, the Contractor shall receive approval by the engineer for the following items in accordance with submittal procedures:
  - 1. A complete list of equipment and material, including name and manufacturer, catalog number, size, and any other pertinent data necessary for proper identification and to determine conformance with specifications.
- B. Following completion of the cathodic protection installations, but prior to final site restoration, the Contractor shall submit the following items for approval by the engineer in accordance with submittal procedures:
  - 1. Testing report including pipeline electrical continuity, effectiveness of dielectric isolating joints, and cathodic protection potential data, anode current output, adequacy of test stations, and conclusions.

## PART 2 - MATERIALS

### 2.1 GENERAL

- A. All materials shall conform to the requirements set forth herein or as designated on the drawings, unless otherwise specified. All materials must be new, free from defects, and shall be of the best commercial quality for the purpose specified. All necessary items and accessories not shown on the drawings or specified herein, but which are required to fully carry out the specified intent of the work, shall be furnished by the Contractor without additional cost to the OWNER.

### 2.2 IMPRESSED CURRENT ANODES

- A. The anodes shall be of high silicon cast iron and of dimensions 3" diameter x 84" length, weigh typically 85 lbs. and be of tubular construction. The anodes shall be Type TA-3 as manufactured by Corpro or approved equal, designed for a centre connection of the anode lead wire.
- B. The anode composition shall be:
  - 1. Carbon 0.7-1.10 %
  - 2. Manganese 1.50 % max.
  - 3. Silicon 14.20-14.75 %
  - 4. Chromium 3.25-5.00 %
  - 5. Molybdenum 0.20 % max.
  - 6. Copper 0.50 % max.
  - 7. Iron remainder

- C. Each anode lead wire shall be AWG No. 8 stranded copper wire with HMWPE HALAR insulation. The anodes and lead wires shall be shop assembled using the "Wedge-lok" wire-to-anode connection and encapsulated against water ingress using epoxy resin seals. The anode lead wires shall be of sufficient length to extend from the anode to the anode junction box without any splices.

## 2.3 ANODE JUNCTION PANEL

- A. The anode junction panel shall include a phenolic terminal board with mounted copper buss bars, copper terminals and 0.01-ohm shunts, as shown in the drawings. The copper cable terminals shall be capable of accommodating the shunts and compression connectors for anode lead wires. A shunt shall be provided for each anode lead wire in the junction panel.

## 2.4 STEEL ENCLOSURE

- A. *The steel enclosure for housing the rectifier and anode junction panel shall comply with NEMA Type 3R.*
  - 1. Enclosures shall be constructed from a minimum 14 gauge mill galvanized steel, finished with 3 - 5 mils of fusion bonded epoxy powder coating of manufacturer's standard color.
  - 2. Hinges, latches and cabinet assembly bolts shall be of stainless steel.
  - 3. Enclosures shall be equipped with a pad-lockable draw latch. Latch shall be manufactured from minimum 14-gauge steel. Draw latch shall accommodate a 3/8-inch shackle padlock.
  - 4. Separate conduit knockouts shall be provided for AC and DC, conveniently located and adequately sized for input and output conduit connectors.

## 2.5 COKE BACKFILL

- A. The anodes in each groundbed shall be backfilled with calcined petroleum coke to the depth specified in the drawings. The coke shall have a minimum carbon content of 99 percent by weight, a bulk density of 46-50 lb/cu. ft. and an electrical resistivity of 0.05 ohm-cm or less at 150 psi. Coke backfill shall be No. 218-L as manufactured by Asbury Graphite, or approved equal.

## 2.6 RECTIFIER

- A. Cathodic protection transformer-rectifier shall be air-cooled, tap adjust model as manufactured by Corppower, or approved equal.
  - 1. DC Output Ratings: Rectifiers shall be rated at 40 Volts, 16 Amps, as shown on the drawings. Rectifiers shall be capable of supplying continuous, full rated output at an ambient temperature of 45° C, in full sunlight with an expected life in excess of 10 years.

2. AC Input Ratings: Rectifier shall be capable of operating with either a 120 or 220 volt, single phase, 60 hertz AC input. Full rated DC output shall be obtainable with an AC input voltage at 5% below the nominal value. Continuous AC input voltage at 10% above the nominal value shall not damage the transformer, the diode bridge assembly, or exceed any component ratings.
3. Cooling: Cooling shall be by natural air convection. Cabinets shall be vented for natural air convection and shall be screened against insects.
4. Voltage Adjustments: The output voltage shall be adjustable by means of not less than 25 approximately equal steps of secondary taps from 5 percent of rated voltage to full-rated voltage.
5. Rectifying Elements: Rectifying elements shall be silicon diodes sized as follows:
  - a. The Peak Inverse Voltage (PIV) of the diode shall be 300% of the maximum impressed voltage on the diode or 400 volts, whichever is greater.
  - b. Diodes shall be configured into a full-wave bridge assembly. Diodes shall be sized to carry an average current of no more than 55% of the manufacturer's recommended maximum current rating.
  - c. Heat sinks shall be sized to keep diode case temperatures less than 100° C at rated rectifier output and at maximum rated ambient temperature.
  - d. Diodes shall be overload protected by means of semiconductor fuses, located in the transformer secondary leg to the diode bridge assembly.
  - e. Diodes shall be equipped with supplemental Metal Oxide Varistor (M.O.V.) surge arrestors at the diode bridge assembly sized to provide protection against secondary over-voltage surges.
6. AC Circuit Breakers: Input overload and short circuit protection shall be provided by magnetic trip circuit breakers. The circuit breaker shall be sized to hold 100 percent of rated load. It may trip between 101 percent and 125 percent of rated load and must trip at 125 percent and above.
7. Surge Protection: Separate AC and DC surge protection shall be provided by means of high energy Metal Oxide Varistors rated at 500 joules on D.C. output and 1000 joules on the AC input.
8. Electrical Panels: Electrical panels shall be minimum thickness of 0.187" NEMA Grade "XX" laminated phenolic, rated for Class "B" operation (105° C maximum). Rectifier front instrument panel identifications shall either be permanently silk-screened onto the panel or be 1/16" lamicaid (plastic

laminate) adhesive labels permanently engraved with white lettering on a black background. If the rectifier is to be installed in a high ambient temperature or high humidity environment, the adhesive labels shall be mechanically affixed to the panel via stainless steel rivets or screws.

9. Connection Hardware: All electrical hardware shall be copper or high conductivity brass, suitably sized, and finished with an electroless nickel plating for superior corrosion resistance. All connections shall be tightly secured with lock washers and nuts torqued to manufacturer's recommended specifications. All electrical connections shall use the "double nut" method to ensure that any compression of the panel material will not affect the electrical conductivity of the connection.
10. Enclosures:
  - a. Enclosures for air cooled, transformer-rectifier shall comply with NEMA Type 3R.
  - b. Enclosures shall be constructed from a minimum 14 gauge mill galvanized steel, finished with 3 - 5 mils of a white, polyester, fusion bonded powder coating.
  - c. Hinges and cabinet assembly bolts shall be of stainless steel.
  - d. Enclosures shall be equipped with a pad-lockable draw latch. Latch shall be manufactured from minimum 14-gauge steel, and finished with a zinc-dichromate plating. Draw latch shall accommodate a 3/8-inch shackle padlock.
  - e. Enclosures shall be equipped with a grounding lug sized to accommodate up to a No. 6 AWG conductor.
  - f. Separate conduit knockouts shall be provided for AC and DC, conveniently located and adequately sized for input and output conduit connectors.
11. Rectifier Instrumentation.
  - a. Rectifier shall be equipped with separate analog ammeter and voltmeter.
  - b. Meters shall be a minimum of 3-1/2" size, with a minimum scale length of 2-7/8".
  - c. Meters shall be 0 - 50 millivolts full-scale deflection, taut-band movement with four-to-one swamping (i.e. internal meter resistance comprised of 25% winding resistance and 75% fully temperature compensated dropping resistor for superior, wide temperature range performance).

- d. Meter accuracy shall be  $\pm 2\%$  full-scale deflection at  $25^{\circ}\text{C}$ ., temperature compensated to  $0.85\%$  per  $10^{\circ}\text{C}$ .
  - e. Rectifier meters shall be scaled to have rated output no less than  $70\%$ , or greater than  $85\%$  of full-scale deflection.
  - f. Meter shunts shall be panel-mounted Holloway type "SW" style, with an accuracy of  $\pm 0.25\%$ .
12. Transformers: Transformers shall meet UL 506, Specialty Transformers and the following:
- a. Transformer designed as full isolation with separate isolated primary and secondary windings with a minimum efficiency of  $95\%$ .
  - b. Transformer secondary shall be equipped with a minimum of 25 steps of secondary voltage adjustment (5-COARSE, 5-FINE). Tap adjustment shall be by means of tap bars.
  - c. Transformer materials and construction shall be rated for Class "H" operation ( $180^{\circ}\text{C}$ ). Insulation materials shall be further enhanced by dipping in thermosetting varnish and baking.
  - d. Transformer shall be rated for a minimum dielectric strength of 2250 volts applied for one minute between the windings, and between the windings and the core.
13. DC Output Connections: Two pressure type connectors shall be provided on the front of the rectifier instrument panel. The positive shall be labeled "Anode" and the negative shall be labeled "Structure." In addition, extra terminals labeled "Test" and "Reference" shall be provided on the rectifier panel for terminating a test lead from the pipe and the lead from a permanent reference electrode.
14. Miscellaneous:
- a. Rectifier shall be capable of operating with either a 120 or 220 volt, single phase, 60 hertz AC input.
  - b. Cathodic Protection Rectifier shall be 100% quality control tested as outlined in this specification.
  - c. During manufacture, the rectifier shall be subjected to frequent visual and performance testing to ensure a high degree of quality acceptance level.
  - d. Rectifiers shall be subjected to 100% testing of the following rectifier electrical parameters:

1. AC input voltage, current, apparent power and true power.
2. DC output current, voltage and power.
3. AC power factor.
4. AC to DC conversion efficiency.
5. Output ripple.
6. Correct operation of filters.

## 2.7 PERMANENT REFERENCE ELECTRODE

- A. The permanent reference electrode shall be packaged Permacell 802 copper-copper/sulfate reference electrode with #14 AWG/HMWPE cable, manufactured by Corrpro, or approved equal. The reference electrodes shall be factory assembled with a chemical backfill in a water permeable cloth sack. The chemical backfill shall be a mixture consisting of 75% gypsum, 20% bentonite, and 5% sodium sulfate. The length of the reference electrode cable shall be sufficient to reach the test station without splicing.

## 2.8 CABLES

- A. Rectifier negative, positive, structure, reference electrode and test lead cable sizes, colors, and type shall be as shown in the drawings.
- B. Test leads for concrete cylinder pipe shall be provided with a factory installed mild steel rod at one end to facilitate arc welding to the pipe, as indicated.
- C. Cable-to-steel rod connection shall be accomplished utilizing an exothermic welding process such as "Cadweld" by Erico Products, Inc., "Thermoweld" by Continental Industries, Inc., or approved equal.
- D. Each cable shall be fitted with a copper sleeve for accomplishing the weld. Cartridge, sleeves and molds for each weld shall be furnished by the same manufacturer.
- E. All materials for welding shall be sized in accordance with recommendations in manufacturer's literature.

## 2.9 DIELECTRIC ISOLATING FLANGE KITS

- A. Isolating flange kits shall include full-faced gaskets, isolating sleeves and washers, and stainless steel washers. The complete assembly shall have a pressure rating equal to that of the flanges between which it is installed. Gasket shall be neoprene faced phenolic, 3.18 mm (1/8-inch) thick having a high dielectric constant of 200 volts/mil or greater. Isolating sleeves shall be mylar, 0.8 mm (1/32-inch) thick. Isolating washers shall be 3.18 mm (1/8-inch) thick phenolic, having a high dielectric constant. Stainless steel washers shall fit well

within the bolt facing on the flange. Isolating washers shall fit within the bolt facing the flange over the outside diameter of the sleeve. Isolating flange kit shall be as manufactured by PSI or approved equal.

## 2.10 WARNING TAPE

- A. All buried cables shall have plastic warning tape installed a minimum of 12-inches above the top of the cables. The warning tape shall be minimum 3-inches wide and shall be yellow with black lettering with legend, "CAUTION, CATHODIC PROTECTION CABLES BURIED BELOW."

## 2.11 PETROLATUM WAX TAPE

- A. Petrolatum wax tape and primer used for coating underground dielectric isolating couplings shall comply with AWWA C217 and shall be as manufactured by Trenton Corp., or approved equal. The tape shall consist of a primer and two layers as follows:
  - 1. First Layer: Primer. Trenton Wax-Tape Primer or approved equal.
  - 2. Second Layer: Plastic fiber felt saturated with petrolatums, plasticizers, and corrosion inhibitors. Trenton #1Wax-Tape or approved equal.
  - 3. Third Layer: "Rock -shield" type material. Trenton Guard Wrap or approved equal.

## 2.12 VENT PIPE

- A. The vent pipe for deep anode bed shall be perforated PVC schedule 40 pipe as indicated in the drawings.

## PART 3 - EXECUTION

### 3.1 GENERAL

#### A. INSTALLATION REQUIREMENTS

All workmanship and installation shall conform to all requirements of the legally constituted authority having jurisdiction. These authorities include, but are not limited to, the latest revision of the National Electric Code, General Construction Safety Orders of the Industrial Accident Commission, OSHA; and all other applicable State, County, or City codes and regulations. Nothing in the drawings or specifications is to be construed to permit work not conforming to these regulations and codes. Where larger size or better grade materials than required by these regulations and codes are specified, the specifications and drawings shall have precedence.



## B. STORAGE OF MATERIALS

All materials and equipment to be used in construction shall be stored in such a manner that these are protected from detrimental effects from the elements. If warehouse storage cannot be provided, materials and equipment shall be stacked well above ground level and protected from the elements with tarps, allowing for adequate ventilation to prevent buildup of moisture condensation.

## 3.2 INSTALLATION

### A. IMPRESSED CURRENT ANODE GROUNDBED

1. The anode groundbed shall be installed as shown in the project drawings. The actual location of the groundbed and rectifier shall be field determined to avoid conflict with other equipment and interests.
2. 10" diameter anode holes shall be drilled at the defined location to the depth indicated in the drawings. The anodes, vent pipe and coke backfill shall then be loaded. After the coke has settled and been "topped up" to the required depth, the grout seal shall be installed and the anode wells shall be backfilled to grade with native soil.
3. Care shall be taken to prevent damage to anode wire insulation. The anodes shall not be suspended by the lead wire at any time during the installation. Damage to the wire insulation will result in rejection of the anode. The anode cables shall be routed to the anode junction box in one continuous length without splice. Cable warning tape shall be provided over buried cables and the anode holes.

### B. ANODE JUNCTION PANEL

The anode junction panel shall be mounted inside the steel enclosure, as shown on the drawings. All wires to be terminated in the anode junction panel shall be identified using plastic labels.

### C. RECTIFIER

The rectifier shall be mounted inside the steel enclosure as detailed in the drawings at the location indicated. The general Contractor shall coordinate with PG&E and bring the AC power to within 10 feet of the rectifier location. AC power to the rectifier shall be provided by the cathodic protection Contractor from the AC power location near (within 10 feet) the rectifier site, including a separate AC disconnect switch and service meter near the rectifier.

#### D. PERMANENT REFERENCE ELECTRODE

Packaged permanent reference electrodes shall be installed as indicated in the drawings at approximately 12-inches from the pipe wall at the depth of the pipeline, and minimum 5 feet from any anodes. Plastic storage bags from the reference electrode shall be removed immediately prior to installation. Reference electrode shall be backfilled with native soil only and shall be covered on all sides with 6-inches minimum soil. When the backfill is even with the top of electrode, 10 gallons of fresh water shall be added to saturate the area. After the water is added, 6-inches minimum of native soil shall be placed over the electrode and compacted to eliminate voids. Care shall be taken to prevent damage to wire insulation. The electrode shall not be suspended by the lead wire at any time during the installation. Damage to the wire insulation will result in rejection of the electrode.

#### E. CABLES

1. Cables buried in the ground shall be laid straight and without kinks. Direct buried cable shall have a minimum cover of 30-inches. Each cable run shall be continuous in length and free of joints or splices. Care shall be exercised during installation to avoid punctures, cuts, and similar damage to insulation. Any damage to insulation will require replacement of the entire cable length. Backfill surrounding the cables shall be native soil free of foreign materials. Plastic cable warning tape shall be placed in the backfill 12-inches directly above the cable runs.

#### F. DIELECTRIC ISOLATING JOINTS

1. Dielectric isolating flange joints shall be installed in the manner and at the locations shown on the plans, using isolating flange kits. All existing and aboveground metallic pipelines shall be electrically isolated from the new underground metallic piping, which will be cathodically protected. At concrete penetrations and at locations where steel pipe ties into reinforced concrete pipe, reinforcing steel must be electrically isolated from steel pipe by providing minimum 2" mortar/concrete cover. Do not install dielectric isolating washers at the protected project pipeline side of the flange. At valves where bolts thread into the valve body, install isolating washers on the project pipeline side of the flange.

#### G. JOINT BONDING

1. Bond all non-welded, non-isolating pipe joints using joint bond cables as shown in the drawings, for electrical continuity of the pipeline.

#### H. DIELECTRIC ISOLATING FLANGE COATING

1. All exposed surfaces of underground flange joints, including the outside of the flange gasket and exposed flange bolts, nuts and washers shall be coated with the specified wax tape and primer. Wax tape shall be applied in accordance with the manufacturer's instructions.

### 3.3 TESTING

- A. After installation of the test stations and cathodic protection facilities, the system shall be tested under the direct supervision of a NACE International certified Cathodic Protection Specialist or Registered Corrosion Engineer hired by the Contractor to ensure conformance with the specifications. A minimum of a 5-day notice shall be given to the Engineer prior to scheduling the energizing and testing of the systems. Any repair or re-testing of the system shall be at the Contractor's expense.
- B. The Contractor shall verify the proper installation of the dielectric isolating flange kits before backfill using Gas Electronics Model 601 Isolation Checker, or approved equal.
- C. The Contractor shall verify the proper installation of any joint bonded pipe joints before backfill using a digital low resistance ohmmeter as manufactured by Biddle, AEMC, or approved equal. Pipeline electrical continuity shall also be verified after backfill by the Contractor.
- D. Prior to introducing test current or energizing the rectifier, static potentials shall be obtained and recorded using a portable reference electrode and potentials measured using each test lead. A high-impedance (10 megohms or more) voltmeter shall be used to measure and record the potential.
- E. Prior to introducing test current or energizing the rectifier and after the testing indicated in the section of 3.3.D (above), dielectric isolation at the south end of the segment and at the north end of segment shall be electrically shorted by connecting one set of pipe cables together at the IJTS (isolation joint test station), if the other segments have been installed (under other contracts).
- F. After energizing the rectifier, polarized pipe-to-soil potentials (rectifier "on" and rectifier "off"), rectifier outputs and individual anode current outputs shall also be measured and documented.
- G. Interference testing shall be conducted at all foreign pipeline crossings to identify and mitigate any adverse effects on the pipelines.

- H. Testing shall include a determination of proper operation and adjustment of rectifier, anodes, test stations, electrical isolation of isolating pipe joints, and electrical continuity of bonded fittings. Testing shall be performed in accordance with NACE Standard SP0169-2007. The tests should consider that the rectifier and anode bed installed within this pipeline segment (3) is intended for protection of adjacent segments at both ends.
- I. A report containing the results of testing shall be submitted no later than 30 days following completion of field testing.

#### 3.4 CLEAN-UP

- A. The Contractor shall be responsible for clean-up and removal of all debris, extra material, and equipment utilized for installation of the cathodic protection system.

- END OF SECTION -

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**SECTION 16752**  
**ELECTRIC services**

**1.00 GENERAL**

**1.01 SCOPE OF WORK**

- A. Furnish all required labor, materials, project equipment, tools, construction equipment, safety equipment, transportation, test equipment, incidentals, and services to provide a complete and operational electrical system as shown on the Project Plans.
- B. The major areas in the scope of work which includes both the furnishing and installation are:
  - 1. Meter Electrical Pedestal.
  - 2. New primary and secondary conduits.
  - 3. Trenching, back filling, compaction and paving of each underground conduit route.
- C. The following specifications incorporate specific equipment and devices that are preferred by the City because of their serviceability, because of the local availability of labor, parts and materials, or because of the ability of the City to umbrella the equipment under existing maintenance contracts; however, favorable alternatives proposed in writing will be considered by the City.
- D. All electrical equipment and materials, including installation and testing, shall conform to the applicable codes and standards listed in this and other Sections. All electrical work shall conform with the National Electric Code (NEC) 2005 issue. Nothing on the Project Plans or in the Specifications shall be construed to permit work or materials not conforming to these codes and standards.

**1.02 CONTRACT DOCUMENTS**

- A. The Project Plans and specifications are intended to be descriptive of the type of electrical system to be provided; any minor details missing in either shall not relieve the Contractor from the obligations there under to install in correct detail any and all materials necessary for a complete operational system, at no additional cost.
- B. The Project Plans are generally diagrammatic; exact locations of electrical products shall be verified in the field with the City Engineer. Except where special details on Project Plans are used to illustrate the method of installation of a particular piece or type of equipment or

materials, the requirements or descriptions in this Section shall take precedence in the event of conflict.

- C. The Contract Electrical elementary, elevation and one-line diagrams are the basis of the electrical system to be provided. It is the Contractor's responsibility to adjust and make minor revisions to the diagrams as necessary for operational system at no additional cost to the City. Additional isolators, relays, wiring, terminal blocks etc. shall be provided for an operation system at no additional cost to the City.
- D. Location at facilities of new equipment, inserts, anchors, panels, pull boxes, conduits, stub-ups, and fittings for the electrical system are to be determined by the Contractor and City Engineer at time of installation. Contractor shall make minor adjustments to locations of electrical equipment required by existing conditions and coordination with other trades at no additional cost.
- E. No changes from the Project Plans or specifications shall be made without written approval of the Engineer. Should there be a need to deviate from the Contract documents, submit written details and reasons for all changes to the City Engineer for favorable review.
- F. The resolution of conflicting interpretation of the Contract documents shall be as determined by the Engineer.

### 1.03 SUBMITTAL AND DRAWING REQUIRMENTS

#### A. GENERAL

- 1. Submit seven (7) copies of shop documents and drawings for approval in accordance with this subsection and Section 124.0 Submittals.
- 2. The Contractor shall ensure all equipment suppliers provide the submittal documentation required in Section 124.0 Submittals and this section. Submittals shall be complete, neat, orderly, and indexed. The Contractor shall check all submittals required under this Division for the correct number of copies, adequate identification, correctness, and compliance with the Contract Specifications and Project Plans, and initial all copies certifying compliance.
- 3. Submittals also include all other information as may reasonably be required, in the opinion of the City Engineer, to demonstrate fully that the materials and equipment to be furnished and the methods of work comply with the provisions and intent of the Contract documents. Additional submittal requirements are specified in each individual section of the specifications.

## B. ELECTRICAL CONTRACTOR SUBMITTALS

1. Submittals include, but are not limited to, product data, samples, requests for substitutions, descriptive data, certificates, methods, schedules, marked contract drawings, and specifications, manufacturer's installation and other instructions, and operations & maintenance manuals miscellaneous work related items
2. Shop documents and drawings shall be submitted for all devices and components in the electrical system. The following items shall have shop documents and drawings submitted for approval:
  - C. No material or equipment shall be allowed at the job site until the submittal for such items has been reviewed by the Engineer and marked "approved" or "approved as
  - D. The decision of the Engineer governs what is acceptable as a substitution. If the Engineer considers it necessary, tests to determine equality of the proposed substitution shall be made, at the Contractor's expense, by an unbiased laboratory that is satisfactory to the Engineer.

### 1.04 COORDINATION

- A. The Contractor shall coordinate the electrical work with the other trades, code authorities, utilities, and the Engineer; with due regard to their work, towards promotion of a rapid completion of the project. If any cooperative work must be altered due to lack of proper supervision of such, or failure to make proper provisions, then the Contractor shall bear expense of such changes as necessary to be made in the work of others.
- B. Manufacturer's directions and instructions shall be followed in all cases where such is not shown on the Contract Drawings or herein specified.
- C. The Contractor shall cease work at any particular point, temporarily, and transfer his operations to such portions of work as directed, when in the judgment of the Engineer it is necessary to do so.
- D. The Contractor shall arrange for the Utility power. (See Item 1.07 below.)

### 1.05 INSPECTIONS

- A. All work or materials covered by the Contract documents shall be subject to inspection at any and all times by the Engineer. If any material does not conform to the Contract documents, or does not



have a "approved" or "approved as noted" submittal status; then the Contractor shall, within three days after being notified by the Engineer, remove the unacceptable material from the premises; and if said material has been installed, the entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the Contractor.

- B. Work shall not be closed in or covered over before inspection and approval by the Engineer. All costs associated with uncovering and making repairs where noninspected work has been performed shall be borne by the Contractor.
- C. The Contractor shall cooperate with the City and provide assistance for the inspection of the electrical system under this Contract. The Contractor shall remove covers, provide access, operate equipment, and perform other reasonable work which, in the opinion of the Engineer, will be necessary to determine the quality and adequacy of the work.

#### 1.06 JOB CONDITIONS

- A. The Contractor shall provide adequate protection for all equipment and materials during shipment, storage and construction. Equipment and materials shall be completely covered with two layers of plastic and set on cribbing six inches above grade so that they are protected from weather, wind, dust, water, or construction operations. Equipment shall not be stored outdoors without the approval of the City. Where equipment is stored or installed in moist areas, such as unheated buildings, provide an acceptable means to prevent moisture damage, such as a uniformly distributed heat source to prevent condensation.
- B. The normal outdoor, not in direct sunlight, ambient temperature range of the job site will vary between 20 to 115 degrees Fahrenheit. All equipment shall be rated to operate in these temperature ranges or provisions, at no additional cost.

#### 1.07 UTILITY SERVICES

##### A. POWER

- 1. It is the responsibility of the Contractor to make all equipment approval arrangements and scheduling with the Utility Power Company connected with this Project. The following lists some of the Contractor's responsibilities for supplying power to the Corrosion Protection equipment:

- a) Ensure that the metering equipment installation is in accordance with requirements of Utility Power Company by submitting drawings, sketches, catalog information, and other appropriate material for Utility Power Company approval.
  - b) Obtain from the Utility Power Company the location, dimensions, construction methods, and mounting arrangements for new electrical service.
  - c) Obtain from the Utility Power Company, the utility engineering drawings for this Project and submit a copy to the City. Contractor shall not start any work relating to the utility prior to submittal of the utility engineering drawings to the City.
  - d) Provide all the equipment and materials not provided by the Utility Power Company for permanent electrical service at the location shown on the drawings and described hereinafter. All work shall meet the requirements of the serving Utility Power Company.
- 2. Schedule within 30 days after award of Contract all service installations and connections with the Utility Power Company. Lack of effort by the Contractor to properly schedule utility service will not be considered valid justification for delays in Project completion and no extension in Contract time will be given.
  - 3. Coordinate all work with the serving Utility Power Company, obtain the required inspections, and notify the respective Utility Power Company when service is required.
  - 4. All work associated with material and installation for the utility power service not paid by the Utility Power Company shall be borne by the Contractor.
  - 5. All fees and charges of the Utility Power Company for new service hook-up will be paid by the City.
  - 6. Submit to the Utility Power Company the proposed meter cabinet details. Provide a written statement from the Utility Power Company that shows approval of the proposed metering.
  - 7. The Utility Power Company contact person for this project is Pacific Gas & Electric Company (PG&E) representative Frank Rios (707) 449-5821.

## 1.08 WIRE

### A. GENERAL

1. The electrical and instrumentation system vendor shall provide the wiring and electrical devices specified below and install the field and internal panel wiring as shown on the Contract Drawings.

## 1.09 DISTRIBUTION

### B. PANEL POWER

1. All electrical and instrumentation panels shall be equipped with a 120 VAC main power disconnect circuit breaker and power distribution circuit breakers. The main power disconnect breaker shall be a one pole breaker rated at 20 amperes. Distribution circuit breakers shall be single pole. The circuit breakers shall be mounted on a standard DIN rail, and shall be Allen - Bradley Channel Mounting Type, or equal.
2. For each power distribution circuit breaker, a neutral return terminal block shall be installed at the bottom of the breaker rail.
3. The terminal blocks shall be standard DIN rail mounted. Terminal blocks shall be rated to carry up to 20 amperes. Terminal blocks shall be Entrelec as specified herein.

## 1.11 COMPONENTS

### A. CIRCUIT BREAKERS

1. Circuit breakers shall be of the indicating type, providing ON, OFF and TRIPPED positions of the operating handle. Circuit breakers shall be quick-make, quick-break, with a thermal-magnetic action, except when protecting motor feeders where motor circuit protector (MCP) breakers with adjustable magnetic trip shall be used. Circuit breakers shall be the bolted on type. The use of tandem or dual circuit breakers in a normal single-pole space to provide the number of poles or spaces specified are not acceptable. All multiple-pole circuit breakers shall be designed so that an overload on one pole automatically causes all poles to open. Circuit breakers and motor circuit protectors shall be manufactured by Westinghouse, G.E., ITE, or approved equal.
2. Each 120 or 240 volt circuit breaker shall have a minimum interrupting rating of 10,000 AIC. Breakers shall be sized as shown on Drawings and as required for the supplied equipment.

#### 1.12 GROUNDING SYSTEM

- A. The utility meter grounding lug shall be tied to a ground grid consisting of a "ground rod" type grounding system.
- B. The ground rod shall consist of not less than 10 continuous feet of ¾ inch copper coated electroplated high grade carbon steel. The ground rod shall be NEHRING type NCC, Weater 348 or approved equal. The ground rod shall extend up for visible connection of a U.L. approved "ground clamp" to the ground bus.
- C. The main ground bonding wire from the UFFER ground shall extend up into the utility meter compartment for the visible connection with a UL approved "ground clamp" attached to the ground bus. The main ground bonding wires shall be a 2/0 bare copper.
- D. Network ground bond wires shall be connected from the ground rod to other points shown on the Contract drawings. The network ground bonding wires shall be 1/0 bare copper minimum.
- E. Ground clamps shall be bolt-on type as manufactured by ILSCO type AGC, Burndy type GAR or GP, or approved equal.
- F. Grounding and bonding wires shall be installed in all PVC conduits and nonmetallic raceways and connected to the ground bus and all equipment.
- G. Grounding conductors shall be sized as shown on the Plans or in accordance with NEC table 250-95, whichever is larger.
- H. Ground buses shall be provided in all electrical enclosures. Each ground bus shall be sized as shown on the Contract drawings or specified herein. The ground bus shall be adequately sized for the connection of all grounding conductors required per NEC. Screw type lugs shall be provided on all ground busses for connection of grounding conductors.
- I. One side of the secondary on all transformers shall be grounded to the ground bus.
- J. All raceway systems, supports, enclosures, panels, and equipment housings shall be permanently and effectively grounded.
- K. All receptacles shall have their grounding contact connected to a grounding conductor.

- L. Attachment of the grounding conductor to equipment or enclosures shall be by connectors specifically provided for grounding. Mounting, support, or bracing bolts shall not be used as an attachment point for ground conductors.
- M. Conduit grounding bushings shall be electra-galvanized malleable iron with insulation collar. They shall be set screw locking type and shall be provided with a feed through compression lug for securing the ground bonding wire.

#### 1.13 CONDUIT, RACEWAYS, AND WIREWAYS

- A. GENERAL - Conduit, raceways, and wireways, wiring methods, materials, installation shall meet all requirements of the NEC, be UL labeled for the application, and meet the minimum following specifications.
  - 1. All wiring shall be installed in conduits, raceways, or wireways when interconnecting equipment and devices.
  - 2. The Contractor shall use special conduit, raceways, wireways, construction methods, and materials as shown on the Contract drawings; which shall take precedence over any general methods and materials specified in this Section.
  - 3. The minimum size conduit shall be 3/4-inch unless indicated otherwise on the Drawings or for special connections to equipment.
  - 4. Conduit stubs for future use shall be capped with coupling, nipple, and plug.
  - 5. Conduits to be abandoned that protrude above graded shall be cut flush and filled with grout.
- B. GALVANIZED RIGID STEEL CONDUIT - (GRS)
  - 1. Standard weight, zinc coated on outside by hot- dipping or sherardizing process, with either zinc coated or other approved corrosion resistant coating on inside. Fabrication shall be hot-dip galvanized after fabrication, conforming to NEMA RN 1.
  - 2. Provide galvanized rigid steel factory ells for 90 degree transitions.
  - 3. Fittings shall be hot dipped galvanized steel or galvanized cast ferrous metal. Provide threaded-type fittings, couplings, and connectors; set-screw type and compression-type are not acceptable.

4. All joints shall be treated with T & B "Kopr-Shield".
5. Conduits entering enclosures shall be fitted with insulated grounding bushing; O-Z "HBLG", Appleton "GIB", or approved equal. All grounding bushings shall be tied to the grounding system with properly sized bonding conductors per the NEC code.

C. Rigid Galvanized Steel Conduit PVC Bonded (GRS-PVC)

Conduit shall conform to the requirements of NEMA RN1, Type A40. GRS-PVC conduit shall be rigid galvanized steel conduit to which an epoxy acrylic primer and a 40 mil thick UV rated polyvinyl chloride coating has been bonded. The interior of all GRS-PVC conduits and fittings shall be coated with a two part chemically cured urethane coating at a 2 mil minimum thickness. Bond strength shall exceed the tensile strength of the plastic coat. Furnish Perma Cote Supreme, Robroy Industries, or approved equal.

1. Provide PVC coated galvanized rigid steel factory elbows for 45 or 90 degree transitions.
2. All fittings used with plastic coated conduit shall be similarly coated with not less than 40 mils of polyvinyl chloride and shall be provided with Type #316 stainless steel hardware.
3. For factory coated conduit, use overlapping PVC sleeves. Sleeves shall extend beyond end of fitting minimum distance equal to nominal diameter of conduit, and shall fit tightly over conduit coating to form a watertight joint. Joints and fittings shall be made tight with strap wrenches.
4. All damage to PVC jacket shall be repaired with four separate applications of PVC paint. Finished patch shall be 0.040-inch minimum thickness. PVC coating patching material shall be as provided by the Manufacturer.
5. Support channel and pipe straps shall be PVC coated. Exposed metal bolts/nuts, and other hardware shall be 316 stainless steel.

D. PVC CONDUIT, SCHEDULE 40 or 80 ( PVC 80, PVC 40 )

1. Shall be high impact schedule 40 or 80 polyvinyl chloride suitable for use underground, direct burial and for use with 90 C wires, and shall conform to UL 651. Shall be UL listed and labeled for "direct" burial.
2. A copper bonding conductor shall be pulled in each raceway and bonded to equipment at each end with approved lugs.

3. Each underground run shall be placed in a trench with a five (5) inch sand bed evenly compacted on all sides, top and bottom.
4. Exposed bends, elbows, and risers in NEMA 4X areas shall be made with PVC coated galvanized rigid steel conduit (GRS-PVC) using threaded adapters. Use GRS risers in NEMA 1 areas. Bond each metallic portion to each other and to equipment connected at each end of conduit run.
5. PVC fittings shall have solvent-weld-type conduit connections.
6. PVC conduit shall be stored on a flat surface and shielded from the sun.

#### E. LIQUID TIGHT FLEXIBLE METAL CONDUIT - (SEAL TIGHT)

1. Minimum trade size one-half inch (1/2").
2. Connectors: Appleton "STB" or approved equal through two inches (2") trade size. Appleton "ST", O-Z "4Q", or equal with insulated bushings for over two inches (2") trade size. Connectors located outdoors shall have PVC coating.
3. Suitable for connection of indoor or outdoor motors, controls, and mechanical equipment.
4. Shall be used for conduit coupling to all vibrating and shifting equipment.
5. Flexible conduit lengths shall not be greater than 36 inches.
6. Flexible metallic conduit shall not be considered as a ground conductor, install a separate wire for equipment bonding.
7. Flexible conduit shall only be installed in exposed or accessible locations.
8. Final connections to vibrating equipment such as motors and fans shall be made with flexible conduits.

### 1.14 DEVICES

#### A. BOXES

1. Indoor device boxes shall be flush mounted zinc-galvanized steel type with shape and size best suited for the particular application, rated for the location installed, and shall be supported directly to structure by means of screws, anchors, or bolts.

2. Box dimensions shall be in accordance with size, quantity of conductors, and conduit clearances per NEC articles 370 requirements.
3. Boxes exposed to the weather or in moist locations shall be cast type with threaded hubs and PVC coating.

#### B. SWITCHES

1. General purpose switches shall be manufactured in accordance with UL 20. Switches shall be one pole rated, 20 amps, at 277 VAC. Bodies shall be of ivory phenolic compound supported by mounting strap having plaster ears. Switches shall have copper alloy contact arm with silver cadmium oxide contacts. Switches shall have slotted terminal screws and a separate green grounding screw. Furnish Hubbell 1221, Leviton 1201-2, or approved equal.
2. Special purpose switches shall be provided with the amperage, voltage, and configuration as shown on the Drawings. Switches used as motor disconnects for single phase motors shall be horsepower rated.

#### C. RECEPTACLES

1. General purpose receptacles shall be duplex and rated 20 amps, 120 VAC, 2 pole, 3 wire grounding, NEMA 5-20R configuration, specification grade, and side wired to screw terminals. Face color shall be brown in industrial areas and white or ivory in finished areas. General purpose receptacles shall be Bryant, Hubbell, or approved equal.
2. GFI (ground fault circuit interrupting) receptacles shall be used for providing power to miscellaneous cord powered equipment. GFI receptacles shall be duplex, 20A, 120V, with "test" and "reset" buttons with shallow design for mounting and standard screw terminals for direct wiring. Receptacles shall be designed, manufactured, and tested to prevent nuisance tripping from voltage spikes, RFI, EMI, or electronic component failures. Chaining multiple receptacles from one GFI unit is not acceptable. GFI receptacles shall be Arrow-Hart "specification grade" or approved equal.

#### D. DEVICE PLATES and COVERS

1. General purpose device plates and covers shall be anodized aluminum. Plates or covers shall be attached with stainless steel screws.



2. Weatherproof switch, outlet, and receptacle boxes shall be fitted with gasketed covers rated for wet locations in accordance with NEC 410-57. Each access cover shall have a cover to maintain the weatherproof integrity even when a plug is connected to the receptacle. Screws and hinge springs shall be stainless steel. Weatherproof access covers shall be TayMac Safety Outlet Enclosures or approved equal.
3. Weatherproof boxes shall have PVC coated cast covers.
4. Device plates and covers for cast metal boxes shall be same material as the box, or as specified on Drawings. Plates or covers shall be finished with a triple coat of zinc electroplate, dichromate, and aluminum polymer.

1.15 PEDESTAL

- A. Provide service meter pedestal per PG&E requirements.

1.15 DAMAGED PRODUCTS

- A. Damage products will not be accepted. All damaged products shall be replaced with new products.

1.16 FASTENERS

- A. Fasteners for securing equipment to walls, floors, and the like shall be stainless steel. The minimum size fastener shall be 3/8 inch diameter.

1.17 INSTALLATION, GENERAL

A. SYSTEM:

1. Install all products per manufacturer's recommendations and the Drawings.
2. Contract Drawings are intended to show the basic functional requirements of the electrical system and do not relieve the Contractor from the responsibility to provide a complete and functioning system.
3. Provide relays, signal converters, isolators, boosters, and other miscellaneous devices as required.

B. PANELS AND ENCLOSURES:

1. Install panels and enclosures at the location shown on the Plans or approved by the Engineer.

2. Install level and plumb.

**C. CONDUITS AND DUCTS:**

1. Except as expressly indicated or approved, all conduits shall be concealed in or below floor slabs or in walls. Care shall be exercised to avoid interference with the work of other trades. This work shall be planned and coordinated with the other trades to prevent such interference. Pipes shall have precedence over conduits for space requirements. Exposed conduits shall be neatly arranged with runs perpendicular or level and parallel to walls. Bends shall be concentric.

**D. EXCAVATION AND BACK FILLING:**

1. Trenches for all lines below floor slabs and all underground electrical lines shall be excavated to the required depths. Conduits under floor slabs shall have trenches no deeper than is required to properly contain bends within walls.
2. Underground conduits outside of structures shall have a minimum cover of 18 inches except under roadways or traffic areas where minimum cover shall be 24 inches. Back filling shall be done only after conduits have been inspected. Material for back filling shall be sand covered by compacted earth back fill. Excavation and back fill of lines and conduits shall conform to the requirements of the Earthwork Section of these Specifications, unless modified on plans, and to other entities as required.
3. At all times during the installation of the electrical distribution system, the Contractor shall provide barricades, fences, guard rails, etc., to safeguard all personnel, including small children, from excavated trenches.

**E. WIRING, GROUNDING, AND SHIELDING:**

1. It is important to observe good grounding and shielding practices in the generally noisy environment in this application. The shield of shielded cables shall be terminated to ground at one end only, the shield at the other end shall be encased in an insulated material to isolate it from ground.

**F. CUTTING AND PATCHING:**

1. The Contractor shall do all cutting and patching required to install his work. Any cutting which may impair the structure or pavement shall require prior approval by the City Engineer. Cutting and patching shall be done only by skilled labor of the respective trades.

All surfaces shall be restored to their original condition after cutting and patching.

G. CLEANING AND TOUCH UP:

1. At the completion of the work, all parts of the installation, including all equipment, exposed conduit, and fittings, shall be thoroughly cleaned of grease and metal cuttings. Any discoloration or other damage to parts of the building, the finish, or the furnishings, due to the Contractor's failure to properly clean the system, shall be repaired by the Contractor without cost to the City.
2. The Contractor shall thoroughly clean any of his exposed work requiring same.
3. Vacuum and clean the inside of all enclosures prior to applying power.
4. The Contractor shall paint scratched or blemished surfaces with the necessary coats of quick drying paint to match existing color, texture and thickness. This shall include all prime painted electrical equipment including but not limited to enclosures, poles, boxes, devices etc.

- END OF SECTION -

**BID BOND**

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS the City of Fairfield ("City") has issued an invitation for bids for the work described as follows:

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch**

WHEREAS Bay Pacific Pipeline Incorporated, 214 Pacheco Ave., Novato, CA 94947

*(Name and address of Bidder)*

("Contractor") desires to submit a bid to City for the work.

WHEREAS, bidders are required under the provisions of the California Public Contract Code to furnish a form of bidder's security with their bid.

NOW, THEREFORE, we, the undersigned Contractor, as Principal, and Liberty Mutual Insurance Company, 1340 Treat Blvd., Ste. 550, Walnut Creek, CA 94597

*(Name and address of Surety)*

("Surety") a duly admitted surety insurer under the laws of the State of California, as Surety, are held and firmly bound unto City in the penal sum of Ten Percent (10%) of Amount Bid

Dollars (\$ (10%) ), being not less than ten percent (10%) of the total bid price, in lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bounded Contractor is awarded a Contract for the work by City and, within the time and in the manner required by the bidding specifications, enters into the written form of Contract included with bidding specifications, furnishes the required bonds, one to guarantee faithful performance and the other to guarantee payment for labor and materials, and furnishes the required insurance coverages, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

In case suit is brought upon this bond, Surety further agrees to pay all court costs incurred by City in the suit and reasonable attorneys' fees in an amount fixed by the court. Surety hereby waives the provisions of California Civil Code § 2845

IN WITNESS WHEREOF, this instrument has been duly executed by Contractor and Surety, on the date set forth below, the name of each corporate party being hereto affixed and these presents duly signed by its undersigned representative(s) pursuant to authority of its governing body.

Dated: April 23, 2013

"Contractor"

Bay Pacific Pipeline Incorporated

"Surety"

Liberty Mutual Insurance Company

By: Catherine Caran  
Title

By: [Signature]  
Title Anthony F. Angelicola, Attorney in Fact

By: PRESIDENT  
Title

By: \_\_\_\_\_  
Title

(Seal)

(Seal)

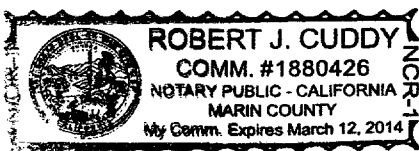
Note: This bond must be dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached.

State of California, County of Marin

Subscribed and sworn to (or affirmed) before me on  
this 2 day of May, 2013,

by Catherin Caran  
proved to me on the basis of satisfactory evidence to  
be the person(s) who appeared before me.

[Signature]  
Signature



## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of San Francisco

On April 23, 2013

Date

before me,

Adia A. Griffith, Notary Public

Here Insert Name and Title of the Officer

personally appeared Anthony F. Angelicola

Name(s) of Signer(s)

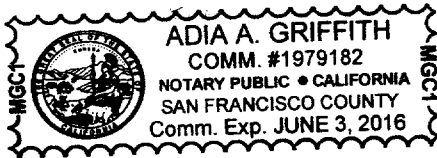
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Signature of Notary Public



Place Notary Seal Above

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_

Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

#### Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — Limited General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER  
Top of thumb here

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — Limited General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER  
Top of thumb here

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 5554405

American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
West American Insurance Company

Liberty Mutual Insurance Company  
Peerless Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, Anthony F. Angelicola; Cecily M. Gipson; John J. Casey; Maureen E. Schmidt

all of the city of San Francisco, state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 6th day of September, 2012.



American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
Peerless Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss  
COUNTY OF KING

On this 6th day of September, 2012, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Insurance Company, Peerless Insurance Company and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company, which resolutions are now in full force and effect reading as follows:

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings.** Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorney-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 23rd day of April, 2013.



By: David M. Carey  
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-810-822-8210 between 9:00 am and 4:30 pm EST on any business day

CITY OF FAIRFIELD

STATE OF CALIFORNIA

ARTICLES OF AGREEMENT

THIS AGREEMENT, made on the 9 day of July, 20 13, by and between CITY OF FAIRFIELD, party of the first part, hereinafter called the CITY, and BAY PACIFIC PIPELINES, INC., party of the second part, hereinafter called the CONTRACTOR.

It is understood the Engineer representing the CITY shall be the City Engineer of Fairfield, acting directly or through properly authorized agents.

WITNESSETH, that the CONTRACTOR and the CITY, for the consideration hereinafter named, agree as follows:

I. SCOPE OF WORK

The CONTRACTOR hereby agrees to furnish all of the materials and all of the equipment and labor necessary and to perform all of the work shown on the plans and described in the specifications for the project entitled:

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch**

all in accordance with the requirements and provisions of the following Documents which are hereby made a part of this Agreement:

- a. Plans prepared for same by C+D Infrastructure Engineers  
numbered C1 through C12 and CP-1 through CP-8 (19 sheets total)  
and dated April 2013
- b. Advertisement for Bids.
- c. The Accepted Bid, dated May 7, 2013
- d. Instructions to Bidders.
- e. Specifications consisting of:
  - 1) Specific Provisions.
  - 2) Special Provisions.
  - 3) General Provisions.
  - 4) City of Fairfield Standard Details and Specifications, 1998 edition.
  - 5) Standard Specifications issued by State of California, Department of Transportation, Division of Highways, dated May 2006.



- f. Performance Bond, dated June 13, 2013
- g. Labor and Material Bond, dated June 13, 2013

All of said documents are intended to cooperate so that any work called for in one and not mentioned in another, or vice versa, is to be executed and performed the same as if mentioned in all of said documents. Said documents, comprising the complete Contract, are sometimes hereinafter referred to as the Contract Documents. Should there be any conflict between the terms of this instrument and the bid or proposal of Contractor or any of the other Contract Documents, this instrument shall control.

## II. TIME OF COMPLETION

- a. The work to be completed under this Contract shall be commenced upon written notice to proceed.
- b. The work shall be completed within **Two Hundred (200) calendar days** after the date of written Notice To Proceed.
- c. Failure to complete the work within the number of days stated in this Article, including extension granted thereto as determined by the Engineer, shall entitle the City to deduct from the monies due to the Contractor as "Liquidated Damages" (LDs) an amount equal to **ONE THOUSAND DOLLARS (\$1000)** for each calendar day or fraction thereof that expires after the time specified herein of the Contractor to complete the work and the facility or improvements are useable for its intended use. LDs shall apply cumulatively and shall be presumed to be damages suffered by the City resulting from delay in the completion of work.
- d. Liquidated Damages for delay in completion of work shall only cover administrative, overhead, general loss of public use damages, interest on bonds and lost revenues, when applicable, suffered by the City as a result of the delay. LDs shall not cover the cost to complete the work, damages resulting for defective work, costs of substitute facilities, or damages suffered by others who seek to recover their damages for the City (for example, delay claims from other contractors, sub-contractors, tenants, or third-parties, and defense costs thereof).

III. CONTRACT SUM

- a. The City shall pay to the Contractor for the performance of the Contract the amounts determined for the total number of each of the following units of work completed at the unit price stated thereafter. The number of units contained in the attached Bid Schedule is approximate only, and the final payment shall be made for the actual number of units that are incorporated in or made necessary by the work covered by the Contract.
- b. Extra work not included in Article I, but authorized after the date of the Contract that cannot be classified as coming under any of the Contract units, may be done at mutually agreed-upon unit prices, or on a lump sum basis, or under the provisions of Section 6 of the General Provisions.

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch  
BID SCHEDULE**

| Item No. | Item of Work   | Unit | Quantity      | Unit Price  | Total Price  |
|----------|--|------|---------------|-------------|--------------|
| 1        | MOBILIZATION (INCLUDES CONFIRMING THE LOCATION OF EXISTING UTILITIES)  | LS   | 1             | \$36,000.00 | \$36,000.00  |
| 2        | EROSION CONTROL AND SWPPP  | LS   | 1             | \$15,000.00 | \$15,000.00  |
| 3        | TRAFFIC CONTROL  | LS   | 1             | \$49,000.00 | \$49,000.00  |
| 4        | UTILITY TRENCHING AND BACKFILL   | LF   | <b>3,436</b>  | \$210.00    | \$721,560    |
| 5        | SHORING  | LS   | 1             | \$15,000.00 | \$15,000.00  |
| 6        | 36-INCH WATER TRANSMISSION PIPELINE  | LF   | <b>3,436</b>  | \$200.00    | \$687,200.00 |
| 7        | 36-INCH BUTTERFLY VALVE  | EA   | <b>2</b>      | \$19,100.00 | \$38,200.00  |
| 8        | 8-INCH COMBINATION AIR VALVE   | EA   | <b>5</b>      | \$18,750.00 | \$93,750.00  |
| 9        | 8-INCH BLOW-OFF ASSEMBLY AND COVER   | EA   | <b>4</b>      | \$16,900.00 | \$67,600.00  |
| 10       | ACCESS MANHOLE (INCLUDES LADDER)   | EA   | <b>4</b>      | \$19,700.00 | \$78,800.00  |
| 11       | CATHODIC PROTECTION (INCLUDES INSTALLATION OF A NEW RECTIFIER WITH ELECTRICAL SERVICE AND A DEEP WELL ANODE)                                 | LS   | 1             | \$38,000.00 | \$38,000.00  |
| 12       | TESTING AND SANITIZING OF PIPING SYSTEM  | LS   | 1             | \$18,500.00 | \$18,500.00  |
| 13       | INSTALL ADA CURB RAMP  | EA   | <b>13</b>     | \$3,500.00  | \$45,500.00  |
| 14       | REMOVE AND REPLACE CURB AND GUTTER   | LF   | 100           | \$25.00     | \$2,500.00   |
| 15       | REMOVE AND REPLACE SIDEWALK  | SF   | 100           | \$8.00      | \$800.00     |
| 16       | COLD PLANE ASPHALT CONCRETE PAVEMENT (TAPER GRIND)   | LF   | 2,400         | \$2.50      | \$6,000.00   |
| 17       | COLD PLANE ASPHALT CONCRETE PAVEMENT (FULL 2" GRIND)   | SY   | <b>7,395</b>  | \$5.00      | \$36,975.00  |
| 18       | BASE FAILURE REPAIR  | CY   | 100           | \$240.00    | \$24,000.00  |
| 19       | PAVEMENT REINFORCING FABRIC (PRF)  | SY   | <b>12,775</b> | \$1.60      | \$20,440.00  |
| 20       | ASPHALT CONCRETE OVERLAY   | TN   | <b>3,275</b>  | \$94.00     | \$307,850.00 |
| 21       | ADJUST VALVES, MONUMENTS AND TRAFFIC BOXES TO GRADE  | EA   | 13            | \$390.00    | 5,070.00     |
| 22       | ADJUST MANHOLES TO GRADE   | EA   | <b>6</b>      | \$525.00    | \$3,150.00   |
| 23       | TRAFFIC STRIPING   | LS   | 1             | \$10,000.00 | \$10,000.00  |
| 24       | ADDITIONAL CATHODIC PROTECTION (REPLACE FAILED DEEP WELL ANODE AT CP018 NEAR THE INTERSECTION OF CEMENT HILL ROAD AND MANUEL CAMPOS PARKWAY) | LS   | <b>1</b>      | \$48,000.00 | \$48,000.00  |

Total = \$2,368,895.00

IV. PROHIBITED INTERESTS

No employee of the City of Fairfield shall have any direct financial interest in this Contract. This Contract shall be voidable at the option of the City if this provision is violated.

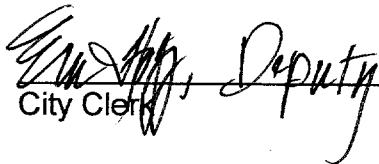
V. WORKERS' COMPENSATION

The Contractor hereby certifies that the Contractor is aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and that the Contractor will comply with such provisions before commencing the performance of the work of this Contract.

IN WITNESS WHEREOF, the parties have executed this Agreement the day and year first above written.

WITNESS:

CITY OF FAIRFIELD

  
City Clerk

By:

  
City Manager *CDM*

Bay Pacific Pipelines, Inc.  
CONTRACTOR

By:

Catherine Casero

President

Title

Licensed in accordance with an act providing for the registration of contractors.

**California All-Purpose  
Acknowledgment Attached**

Contractor's License:

a. Class: A

b. Number: 524020

c. Expiration Date: 2/28/2014

FEI Number: 94-3056784

# **EDD REPORTING REQUIREMENTS CHECKLIST**

Effective January 1, 2001 the State Employment Development Department (EDD) requires the following.

**Please complete the following:** (To be complete by the department)

Department: \_\_\_\_\_ Date of Contract: \_\_\_\_\_  
 Authorized by Res. No.: \_\_\_\_\_ Contract Expiration Date: \_\_\_\_\_  
 Person Reviewing EDD Requirements: \_\_\_\_\_ Phone: \_\_\_\_\_

**EDD REPORTING REQUIREMENTS.** When CITY executes an agreement for or makes payment to CONSULTANT in the amount of \$600 (six hundred dollars) or more in any one calendar year, CONSULTANT shall provide the following information to CITY to comply with EDD reporting requirements:

- A. Whether CONSULTANT is doing business as a sole proprietorship, partnership, limited liability partnership, corporation, limited liability corporation, non-profit corporation or other form of organization.
- B. If CONSULTANT is doing business as a sole proprietorship, CONSULTANT shall provide the full name, address and social security number or federal tax identification number of the sole proprietor.
- C. If CONSULTANT is doing business as other than a sole proprietorship, CONSULTANT shall provide CONSULTANT's federal tax identification number.

\*\*\*\*\*

\*

Dear Contracting Company:

Pursuant to your Contract with the above-mentioned City of Fairfield Department, you are required to complete box 1 AND box 2 below.

Please indicate the type of business and provide the information requested:

## **BOX 1**

| NAME AND ADDRESS |                            |
|------------------|----------------------------|
| FULL NAME        | Bay Pacific Pipelines Inc. |
| ADDRESS          | 214 PALMISTO AVE           |
| CITY, STATE, ZIP | Novato, CA 94947           |

**AND**

## **BOX 2**

| X Box | TYPE OF BUSINESS              | SOCIAL SECURITY NUMBER AND/OR FEDERAL ID NUMBER |
|-------|-------------------------------|---|
|       | SOLE PROPRIETORSHIP           |   |
|       | PARTNERSHIP                   |   |
|       | LIMITED LIABILITY PARTNERSHIP |   |
|       | CORPORATION                   | 94-3056784                                      |
|       | LIMITED LIABILITY CORPORATION |   |
|       | NON-PROFIT CORPORATION        |   |
|       | OTHER FORM OF ORGANIZATION    |   |

**PLEASE RETURN THIS FORM WITH THE SIGNED CONTRACT TO THE CITY OF FAIRFIELD**

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

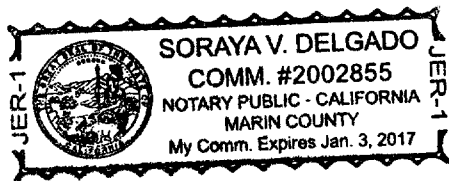
County of Marin

On June 19, 2013 before me, Soraya V. Delgado, Notary Public

Personally appeared Catherine Carew,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) ~~is/are~~ subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California the foregoing Paragraph is true and correct.



WITNESS my hand and official seal.

Soraya V. Delgado (Seal)

My commission, Number 2002855, expires January 3, 2017

## OPTIONAL INFORMATION

### DOCUMENT

Title or Type of Document Articles of Agreement

Date of Document \_\_\_\_\_ Number of Pages 6 pgs

Other Signer(s) \_\_\_\_\_

### SIGNER'S CLAIMED CAPACITY

☐ Individual ☐ Other \_\_\_\_\_

Premium: Included in Performer  
Bond

**PAYMENT BOND  
(LABOR AND MATERIALS)**

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS the City of Fairfield ("City") has awarded to \_\_\_\_\_  
Bay Pacific Pipeline Incorporated, 214 Pacheco Ave., Novato, CA 94947

\_\_\_\_\_  
(Name and address of Contractor)

("Contractor"), a contract (the "Contract") for the work described as follows:

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch**

WHEREAS, Contractor is required under the terms of the Contract and the California Civil Code to secure the payment of claims of laborers, mechanics, materialmen and other persons as provided by law.

NOW, THEREFORE, we, the undersigned Contractor, as Principal, and \_\_\_\_\_  
Liberty Mutual Insurance Company, 13430 Treat Blvd., Ste. 550, Walnut Creek, CA 94597

\_\_\_\_\_  
(Name and address of Surety)

("Surety") a duly admitted surety insurer under the laws of the State of California, as Surety, are held and firmly bound unto City in the penal sum of \_\_\_\_\_  
Two Million Three Hundred Sixty Eight Thousand Eight Hundred and Ninety Five

Dollars (\$ 2,368,895.00 ), this amount being not less than one hundred percent (100%) of the total Contract price, in lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bounded Contractor, his, her or its heirs, executors, administrators, successors or assigns, or subcontractors shall fail to pay any of the persons named in Section 3181 of the California Civil Code, or any amounts due under the Unemployment Insurance Code with respect to work or labor performed under the Contract, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Contractor and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, with respect to work or labor performed under the Contract, the Surety will pay for the same in an amount not exceeding the penal sum specified in this bond; otherwise, this obligation shall become null and void.

This bond shall insure to the benefit of any of the persons named in Section 3181 of the California Civil Code so as to give a right of action to such persons or their assigns in any suit brought upon the bond. In case suit is brought upon this bond, Surety further agrees to pay all court costs and reasonable attorneys' fees in an amount fixed by the court.

FURTHER, the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, addition or modification to the terms of the Contract, or of the work to be performed thereunder, or the specifications for the same, shall in any way affect its obligations under this bond, and it does hereby waive notice of any such change, extension of time, alteration, addition, or modification to the terms of the Contract or to the work or to the specifications thereunder. Surety hereby waives the provisions of California Civil Code §§ 2845 and 2849.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by Contractor and Surety, on the date set forth below, the name of each corporate party being hereto affixed and these presents duly signed by its undersigned representative(s) pursuant to authority of its governing body.

Dated: June 13, 2013

"Contractor"

Bay Pacific Pipeline Incorporated

By: Catherine Capen  
Title President

By: \_\_\_\_\_  
Title \_\_\_\_\_

(Seal)

"Surety"

Liberty Mutual Insurance Company

By: [Signature]  
Title Anthony F. Angelicola, Attorney in Fact

By: \_\_\_\_\_  
Title \_\_\_\_\_

(Seal)

Note: This bond must be executed in duplicate and dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached.

**California All-Purpose  
Acknowledgment Attached**



CERTIFICATE OF ACKNOWLEDGMENT - Attorney-in-Fact

STATE OF CALIFORNIA )  
COUNTY OF \_\_\_\_\_ ) ss.

On this \_\_\_\_\_ day of \_\_\_\_\_, in the year \_\_\_\_\_, before me, the undersigned Notary Public in and for said state, personally appeared \_\_\_\_\_ is personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, as the Attorney-in-Fact of \_\_\_\_\_ acknowledged to me that he/she subscribed the name of \_\_\_\_\_ thereto as principal and his/her own name as Attorney-in-Fact.

\_\_\_\_\_  
Notary Public in and for the

County of \_\_\_\_\_  
State of California

(SEAL)

My Commission Expires \_\_\_\_\_

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 5952765

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, **ANTHONY F. ANGELICOLA; CECILY M. GIPSON; JOHN J. CASEY; MAUREEN E. SCHMIDT; TERENCE T. CASEY** .....

all of the city of SAN FRANCISCO, state of CA each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 16th day of January, 2013.



STATE OF WASHINGTON ss  
COUNTY OF KING

American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

On this 16th day of January, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings.** Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 13th day of June, 2013.



By: David M. Carey  
David M. Carey, Assistant Secretary

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of San Francisco

On June 13, 2013

Date

before me,

Adia A. Griffith, Notary Public

Here Insert Name and Title of the Officer

personally appeared Anthony F. Angelicola

Name(s) of Signer(s)

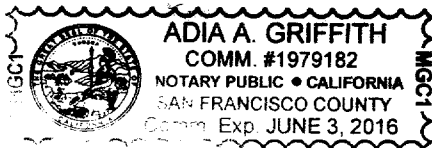
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Signature of Notary Public



Place Notary Seal Above

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

#### Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California  
County of Marin

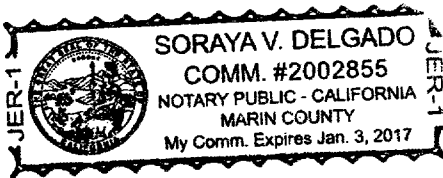
On June 19, 2013 before me, Soraya V. Delgado, Notary Public

Personally appeared Catherine Carew,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the  
laws of the State of California the foregoing  
Paragraph is true and correct.

WITNESS my hand and official seal.



Soraya V. Delgado (Seal)

My commission, Number 2002855, expires January 3, 2017

## OPTIONAL INFORMATION

### DOCUMENT

Title or Type of Document Payment Bond (Labor & Materials)

Date of Document \_\_\_\_\_ Number of Pages 5 pgs

Other Signer(s) \_\_\_\_\_

### SIGNER'S CLAIMED CAPACITY

☐ Individual ☐ Other \_\_\_\_\_

**PERFORMANCE BOND**

KNOW ALL PERSONS BY THESE PRESENTS that:

WHEREAS the City of Fairfield ("City") has awarded to \_\_\_\_\_  
Bay Pacific Pipeline Incorporated, 214 Pacheco Avenue, Novato, CA 94947

\_\_\_\_\_  
(Name and address of Contractor)

("Contractor") a contract (the "Contract") for the work described as follows:

**EAST-WEST WATER TRANSMISSION PIPELINE  
SEGMENT 3, 36-inch**

WHEREAS, Contractor is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract.

NOW, THEREFORE, we, the undersigned Contractor, as Principal, and \_\_\_\_\_  
Liberty Mutual Insurance Company, 13430 Treat Blvd., Ste. 550, Walnut Creek, CA 94597

\_\_\_\_\_  
(Name and address of Surety)

("Surety") a duly admitted surety insurer under the laws of the State of California, as Surety, are held and firmly bound unto City in the penal sum of \_\_\_\_\_

Two Million Three Hundred Sixty Eight Thousand Eight Hundred and Ninety Five

Dollars (\$ 2,368,895.00 ), this amount being not less than one hundred percent (100%) of the total Contract price, in lawful money of the United States of America, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the hereby bounded Contractor, his, her or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform all the undertakings, terms, covenants, conditions and agreements in the Contract and any alteration thereof made as therein provided, on the Contractor's part to be kept and performed, all within the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and hold harmless the City, its officers, agents, and others as therein provided, then this obligation shall become null and void; otherwise, it shall be and remain in full force and effect.

In case suit is brought upon this bond, Surety further agrees to pay all court costs and reasonable attorneys' fees in an amount fixed by the court.

FURTHER, the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, addition or modification to the terms of the Contract, or of the work to be performed thereunder, or the specifications for the same, shall in any way affect its obligations under this bond, and it does hereby waive notice of any such change, extension of time, alteration, addition, or modification to the terms of the Contract or to the work or to the specifications thereunder. Surety hereby waives the provisions of California Civil Code §§ 2845 and 2849. The City is the principal beneficiary of this bond and has all rights of a party hereto.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original hereof, have been duly executed by Contractor and Surety, on the date set forth below, the name of each corporate party being hereto affixed and these presents duly signed by its undersigned representative(s) pursuant to authority of its governing body.

Dated: June 13, 2013

"Contractor"

Bay Pacific Pipeline Incorporated

\_\_\_\_\_

By: Catherine Carew  
Title President


By: \_\_\_\_\_  
Title \_\_\_\_\_

(Seal)

"Surety"

Liberty Mutual Insurance Company

\_\_\_\_\_

By:   
Title Anthony F. Angelicola, Attorney in Fact

By: \_\_\_\_\_  
Title \_\_\_\_\_

(Seal)

*Note: This bond must be executed in duplicate and dated, all signatures must be notarized, and evidence of the authority of any person signing as attorney-in-fact must be attached.*

**California All-Purpose  
Acknowledgment Attached**

**THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND.**

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. 5952762

American Fire and Casualty Company  
The Ohio Casualty Insurance Company

Liberty Mutual Insurance Company  
West American Insurance Company

**POWER OF ATTORNEY**

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, **ANTHONY F. ANGELICOLA; CECILY M. GIPSON; JOHN J. CASEY; MAUREEN E. SCHMIDT; TERENCE T. CASEY**.....

all of the city of **SAN FRANCISCO**, state of **CA** each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this 16th day of January, 2013.



American Fire and Casualty Company  
The Ohio Casualty Insurance Company  
Liberty Mutual Insurance Company  
West American Insurance Company

By: Gregory W. Davenport  
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss  
COUNTY OF KING

On this 16th day of January, 2013, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.



By: KD Riley  
KD Riley, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows:

**ARTICLE IV – OFFICERS** – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

**ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings.** Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

**Certificate of Designation** – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorneys-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

**Authorization** – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 13th day of June, 2013.



By: David M. Carey  
David M. Carey, Assistant Secretary

## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of San Francisco

On June 13, 2013

Date

before me, Adia A. Griffith, Notary Public

Here Insert Name and Title of the Officer

personally appeared Anthony F. Angelicola

Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

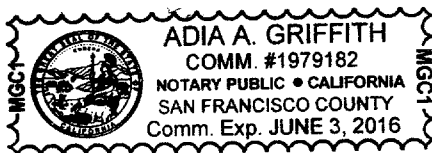
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature

Signature of Notary Public

Place Notary Seal Above



### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

#### Capacity(ies) Claimed by Signer(s)

Signer's Name: \_\_\_\_\_

☐ Individual

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

Signer's Name: \_\_\_\_\_

☐ Individual

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

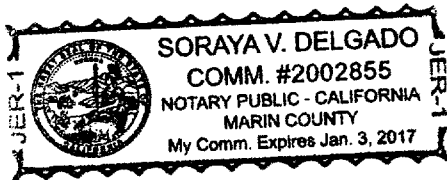
State of California  
County of Marin

On June 19, 2013 before me, Soraya V. Delgado, Notary Public

Personally appeared Catherine Carew,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that ~~he/she/they~~ executed the same in ~~his/her/their~~ authorized capacity(ies), and that by ~~his/her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California the foregoing Paragraph is true and correct.



WITNESS my hand and official seal.

Soraya V. Delgado (Seal)

My commission, Number 2002855, expires January 3, 2017

## OPTIONAL INFORMATION

### DOCUMENT

Title or Type of Document Performance Bond

Date of Document \_\_\_\_\_ Number of Pages 4 pgs

Other Signer(s) \_\_\_\_\_

### SIGNER'S CLAIMED CAPACITY

☐ Individual ☐ Other \_\_\_\_\_